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Agricultural Land Preservation in Region 5

WAPORA, Inc., Chevy Chase, MD

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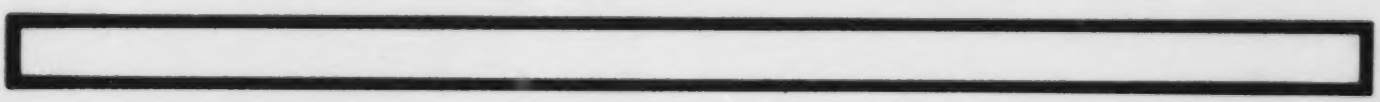

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This report provides an overview of the factors affecting agricultural land conversion for a Federal and State regulatory audience. Programs and policies to maintain agricultural land are covered at the State and Federal levels, stressing EPA and the Region V States of Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin. Comprehensive State program examples for Oregon and Maryland are covered. A quantitative methodology for evaluating the impacts of a proposed action on agricultural land is proposed.

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REPORT ON AGRICULTURAL LAND PRESERVATION IN REGION V

U. S. Environmental Protection Agency
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1.0. INTRODUCTION

The preservation of agricultural lands addresses two main concerns: (1) the reduction in the quantity or acreage of the nation's agricultural lands, and (2) the lessening of available farmland through soil erosion or other factors. Together, these two patterns may lead to a general diminution in the nation's agricultural production. Because of the importance of protecting and preserving America's farmlands, a number of studies have been completed which examine various aspects of this issue. A brief description of these studies, as well as related national policies, is presented below.

From the early 1920s through the 1960s, agricultural policies were directed at reducing surpluses of crops and livestock, partly by withholding land from production. Between 1935 and 1974, the number of farms declined from 6.8 million to 2.3 million, while farm output more than doubled. In recent years, however, the adequacy of the nation's agricultural land base to meet future food production needs has been questioned. Factors leading to this concern include:

- Uncertainty as to whether worldwide population growth will exceed our ability to increase production by applying technology and energy to land and water resources.
- Changes in the nationwide agricultural system, including production, transportation and marketing, that threaten the continued economic viability of farming as a commercial enterprise.
- Other economic factors which also threaten the continued viability of farming including the high market value of land near urban areas, tax assessments on farms for services they don't use, inheritance taxes, and conflicts between agricultural and urban land uses.
- The recent trend of increased population growth in rural areas; during the 1970s, the rate of population growth in rural areas exceeded that of urban areas for the first time in this century.

- The difficulty in developing and implementing local, state and Federal policies and regulations to protect agricultural land while recognizing the prevailing national ideal that land ownership entails the opportunity to use land to meet personal needs if those needs do not threaten the health, safety and welfare of the community.

The importance of maintaining the nation's agricultural potential thus involves such issues as the agricultural system itself (increased productivity at the expense of increased inputs of energy); national and international economics (agricultural exports as a means of reducing trade deficits); regional and national land use considerations (the right to free movement and settlement); legal implications (the dichotomy between commonly-held perceptions concerning land ownership and legal interpretations which hold that land ownership only entails the right to use land in ways which are consistent with the common good as defined by units of land government); and other factors. Hence, the concern over the nation's ability to maintain a level of agricultural potential that meets the needs of the country, and to a greater extent in the future, the world, involves a complex dynamic of forces that affect the importance of agricultural land from an economic, political and social perspective.

Much of the current debate over the preservation of agricultural land was sparked by the publication of the National Agricultural Lands Study (NALS) in 1981. According to the Study, three million acres of agricultural land are being lost each year to non-agricultural uses. The NALS reports have received considerable scrutiny and have stimulated much discussion since their publication, including the fact that a growing number of experts have concluded that there is no crisis in the supply of agricultural land, either at present or in the future. This conclusion is based on the belief that the information presented in the NALS reports are based on inadequate data and inaccurate analyses. Further, many experts believe that the conversion of land to urban uses is affecting agricultural production significantly less than other factors such as crop yields, erosion, and scattered rural development.

Regardless of the amount of agricultural land that is actually converted to urban uses on a yearly basis, or the significance of other fac-

tors that threaten the viability of farming as a commercial enterprise, there is no question that the maintenance of an adequate resource base and sound agricultural economy is an important national priority. Although the debate as to the real or imagined threats to agriculture in the United States. is still unfolding, decision-makers at all levels of government and interested citizens are becoming increasingly aware of the importance of agriculture to the nation's economic and social well-being. As a result, a number of local, state and federal policies and programs have been developed to address particular issues concerning the preservation of agricultural land and the maintenance of an agricultural potential sufficient to meet future needs.

The objective of this Report is to provide the US Environmental Protection Agency (EPA) and state agency personnel with an overview of the factors affecting the conversion of agricultural land, as well as the programs and policies that have been used or could be applied in order to maintain agricultural potential. This Report summarizes the factors influencing the conversion of agricultural land and the measures that have been taken at the state and federal level to minimize the continued loss of agricultural land to other land uses. Some of the basic causes of agricultural land conversion are described in Section 2.0. along with a discussion of the direct and indirect methods that have been developed to protect farmland. An overview of federal policies and regulations concerning agricultural land protection is presented in Section 3.0. The programs and policies that are being used in US Environmental Protection Agency (EPA) Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin) to preserve farmland are described in Section 4.0. Two State programs (those of Oregon and Maryland) that attempt to address in a comprehensive manner the protection of agricultural land are discussed in Section 5.0. Finally, Section 6.0. describes a quantitative method for assessing the impacts of proposed actions on agricultural land (the Agricultural Land Evaluation and Site Assessment methodology).

2.0. BASIC METHODS OF AGRICULTURAL LAND PRESERVATION

In recent years the conversion of agricultural land to other types of land uses has gained an increasing amount of attention. Many articles, books, and conferences have focused on the causes and solutions to the loss of agricultural land. This chapter summarizes available information.

2.1. Causes of Agricultural Land Conversion

Agricultural land is converted to other types of uses for a variety of reasons. These reasons can be catgorized into three broad areas: economic factors, nuisance factors, and the taking for public uses.

2.1.1. Economic Factors

The economic factors that eventually lead to agricultural land conversion are, for the most part, directly related to urban development that occurs in an agricultural area. In general, agricultural lands near or contiguous to developed areas are appraised at a higher market value than are lands that are not; this difference in market value reflects the land's potential for urban development. However, while an increased market value may be desired by the landowner, the higher appraised value results in a greater property tax burden on the farmer. Many farmers cannot afford the additional property taxes and decide to relocate their operations elsewhere, selling the land to developers or speculators.

Another type of economic factor that plays a role in farmland conversion is the special assessment taxes on farmland. When a municipality provides services or improvements such as water, sewerage, or drainage to an isolated developed area, the lines or other improvements may run along the edge of a farm or across it. The owner of the farm is assessed a portion of the improvement's cost based on the front-footage or other method. Even though the farmer has no use for the service or improvement in his farming operations, he is required to pay for their construction costs, thus creating an economic burden that may force him to sell his land and farm elsewhere.

A third economic factor leading to farmland conversion is the increase in property tax millage rates as a result of nearby urban development. As nearby towns and villages experience growth in population and physical size, additional services such as schools, hospitals, fire protection, libraries, transportation systems, etc. are required by the residents. To fund such services and facilities the tax millage rate is often increased to produce greater tax revenues. Therefore, farmland within the tax jurisdiction often has higher annual tax bills, creating an additional economic burden that makes farming of the land less profitable and leading to conversion of the land.

A final economic factor sometimes resulting in the conversion of farmland to other uses is the federal taxation policy on inheritance and gifts. The federal estate and gift tax provisions may pose substantial and unique barriers for farmers in the transfer of wealth (in this case, farmland) from one generation to the next. Estate taxes are so substantial that often the beneficiaries of farmland are forced to sell part of their inheritance in order to pay the tax. This situation results in a larger number of smaller agricultural parcels that may not be suitable for efficient farming operations. Also, depending on the location of the farmland, the parcel sold to pay taxes may be used for other uses instead of agriculture; thus, the conversion of farmland takes place.

2.1.2. Nuisance Factors

A basic incompatibility exists between farming activities and residential or other urban land uses. Farming activities can create noise, dust, odors, and other inconveniences that affect nearby non-farm land uses. As residential development becomes more common in rural areas, farmers become subject to lawsuits by residential landowners who claim that the farm operations are a nuisance. Residential landowners may force local officials to pass ordinances which restrict both the type of operations that may occur on a farm and the hours of such operations. The end result is that the farmers are harrassed by their neighbors and are forced to defend themselves against legal proceedings and/or severly limit the types and times of farming activities to suit the residential population. This aggravation and harrassment are expensive and time consuming to the farmer.

Often, the farmer's only solution to the problem is to sell the farm, subjecting the agricultural land to conversion to other uses.

2.1.3 Taking for Public Use

The final general category of factors leading to farmland conversion is the public taking of land by eminent domain. Agricultural land is taken through the power of eminent domain for public uses such as highways, reservoirs, parks, airports, power line corridors, and pipeline rights-of-way. These types of public projects can consume and irreversibly convert large amounts of agricultural land.

2.2. Methods of Farmland Protection

A variety of methods have been devised to protect farmland from conversion to other uses. These methods are categorized as follows: indirect, direct, and integrated. Indirect farmland preservation methods are those incentives offered to the farmer for the purpose of either reducing economic burdens caused by nearby development or protecting the farmer from local nuisance ordinances that might interfere with normal farming operations. Indirect farmland incentives include tax relief programs, agricultural districting, and right-to-farm laws. Direct farmland preservation methods are those land use controls aimed at specific lands designated for agricultural protection and/or preservation. Typically, these land use controls are zoning and the transfer or purchase of development rights. Integrated methods are comprised of two or more of the direct or indirect methods formed into a unified program of farmland preservation. The following sections briefly describe these methods and their effectiveness.

2.2.1. Indirect Methods

Indirect farmland preservation methods include programs that offer tax relief to farmers, create agricultural districts to discourage farmland conversion, and right-to-farm legislation.

2.2.1.1. Tax Relief

Tax relief programs are designed to remove some of the economic burdens that are associated with farming. These programs consist of preferential assessment, deferred taxation, tax credits, and preferential assesment for inheritance tax purposes.

Preferential assessment programs assess farm property for real property tax purposes at its agricultural or current use value, rather than at its fair market value (FMV). The FMV includes the development potential of the land, thus raising land values and assessments beyond the means of many farmers. The overall effect of preferential tax assessment is to reduce farm taxes by the difference between fair market value and a current use value assessment. The effectiveness of preferential assessment as a method of preventing the loss of farmland may be measured by the percentage of farmers that are able to take advantage of the program. However, strict eligibility requirments may cause fewer farmers to participate in the program. Moreover, the land must meet certain eligibility conditions in order to be included in the preferential tax assessment program; the conditions though minimal, may include the requirement that the land be in agricultural use presently, or has been agricultural use for a predetermined number of years. Also, it is likely that farms in the vicinity of urban growth areas would obtain higher benefits than other farms because of the higher market value of land closer to developed urban areas.

Deferred taxation programs combine an economic deterrant to later agricultural land conversion with the preferential assessment of farmland. Eligible farmland is assessed at current use value for real property tax purposes, however, if the farmland owner decides to convert the land to non-farm use he has to pay some or all of the taxes that had been deferred previously. This type of program is designed to deter landowners from converting their farmland to other uses and to recoup some of the lost tax revenues if such conversion occurs. The length of time for which deferred taxes must be repaid varies from two to twenty years, but is typically between four and seven years. Another variation of deferred taxation is the land use change tax which simply makes the deferred tax equal to a stated percentage of the FMV. The relative effectiveness of deferred

taxation methods depends largely on the magnitude of the penalty. The larger the penalty imposed the less attractive the sale of the land will be to a prospective developer. Used alone, the deferred taxation method has proven not to be an effective deterrant to farmland conversion.

Tax credits are another method of reducing the economic burden of real property taxes on farmers. These programs are called "circuit breakers" in that they allow an eligible owner of farmland to apply some or all of the property taxes on his farmland to a tax credit against his state income tax. This type of program relieves the farmer of additional real property taxes once they exceed a given percentage of his or her income. Eligibility requirements vary, but generally a specified minimum gross acreage and gross annual income from agriculture is stated. Currently, Michigan and Wisconsin use tax credits as part of their farmland prevention program.

Preferential assessment for inheritance tax purposes is intended to relieve the economic burden on the heirs to farmland in order to keep the farmland estate intact and operable as a farm. The Tax Reform Act of 1976 (P.L. 94-455) and the Revenue Act of 1978 (P.L. 95-600) made major changes in estate and inheritance tax provisions affecting farmers. Many states have incorporated some or all of these provisions into their own death tax laws. Basically, these laws call for the appraisal of eligible farmland for inheritance tax purposes to be made at the farm value instead of FMV. The Tax Reform Act of 1976 also has provisions for deferral of tax payment, thus enabling the executor of an estate to defer payment of taxes for five years and then make equal payments over a period of ten years. These inheritance tax provisions both at the federal and state levels reduce estate taxes for farm families and, as a result, lower the rate at which farmland might be converted to non-farm use by effectively reducing the number of farm estate sales caused by insufficient liquidity.

In assessing the overall effectiveness of tax relief methods two factors must be examined -- the effectiveness of reducing economic burden and the effectiveness of reducing the rate of farmland conversion. Tax relief programs for farmers are generally effective in reducing the economic burden of taxes. However, the magnitude of the reduction varies greatly from one location to another as does the number of eligible farms

and farmers. Tax relief programs in themselves, are not effective techniques for reducing the rate of conversion of farmland to non-farm uses. If a farmer is under pressure to sell his land for other uses, tax incentives only postpone the sale a few years, at best. Tax incentives, alone, cannot outweigh other considerations such as high offering prices for farmland on the fringe of urban development.

2.2.1.2. Agricultural Districts

The creation of agricultural districts is another example of indirect incentives. Agricultural districting provides a geographical and organizational framework within which certain incentives can be made available to farmers. The farmers voluntarily join the district, thereby enjoying the benefits which make their farms free from undesirable factors. The position of agriculture as a livelihood and land use in the district and community as a whole is thereby significantly strengthened and reinforced. These districts are legally recognized areas whose formation is initiated by one or more farmers and approved by the appropriate government agencies. The individual farmers that comprise the district join for a fixed, but renewable, period of years, usually ranging from four to ten years.

Agricultural districting programs are made up of several elements (incentives). In the districting programs developed to date, 13 elements have been used in varying combinations. These elements are:

- Differential assessment of real property taxes to reduce economic burden on farmowners;
- Protection from local government ordinances which hinder farming activities;
- Limitations on public improvement investments that promote non-farm developments within the agricultural district;
- Limitations on the use of eminent domain by public agencies to acquire land within agricultural districts;
- Limitations on special assessments for community services;
- State agency regulations and procedures supportive of continued agricultural activities within districts;

- Limitations on annexations of district lands by municipalities;
- Requirements for sound conservation practices;
- Limitations on the rate of tax increases;
- Compensation to local government units for tax revenue losses due to other program elements;
- Zoning land adjacent to agricultural districts so as to reduce conflicts and development pressures;
- Purchase of development rights or easements to lands within the district; and
- Limitations on development of districted land with zoning or other restrictions.

Of these thirteen elements, the first six are used most frequently in the agricultural district programs developed to date.

The criteria and standards for agricultural district formation vary from state to state, but generally specify a minimum size, contiguity of parcels, and minimum soil quality requirements. The purpose of a minimum size criterion is to ensure that the district will be able to support agriculture even if it is surrounded by non-agricultural development. With a larger district, more of the land will be located within the interior which is protected from non-farm land uses. Contiguity of parcels in an agricultural district is encouraged or required by most programs. This situation tends to allow the district to function more effectively and eases administration. In reality, most districts contain land which is not part of the district. The land characteristics of areas to be considered for districting is an important concern. Most programs specify that: (1) the land in districts must be of sufficient quality in order to support a viable agricultural industry, and (2) the formation of a local advisory committee be made up of active farmers and other local citizens in order to evaluate land before its inclusion into the district.

The effectiveness of agricultural districts as a means of reducing the rate of farmland conversion varies depending on the particular combination of elements included in the district's program. Most current districting programs have not been in operation long enough to draw conclusions about

their effectiveness. At this time, it appears that districts provide farmers with more of an enhanced sense of security and protection, rather than reducing the rate of farmland conversion. The continued development of districting legislation may produce better results for farmland protection in the future.

2.2.1.3. Right-To-Farm Legislation

The basic incompatibility between some farming operations and residential uses often results in complaints and nuisance lawsuits by residential landowners. In at least 17 states, farmers have turned to their state legislators for relief. So-called right-to-farm laws have been developed to protect the farming community from harrassment by its neighbors. Three basic types of laws have been used:

- Laws protecting farmers against local government regulations;
- Laws protecting farmers against state regulations; and
- Laws protecting farmers against private nuisance lawsuits.

Many states provide more than one form of protection, particularly protection from local government regulations and private nuisance lawsuits in combination. In some states, such as Illinois, the law only applies to farms that are included in agricultural districts. Very little information is available with which to assess the effectiveness of right-to-farm legislation because most existing laws are only three or four years old and have not been extensively proven in courts of law. The laws' intentions are good: to protect the farmer against unnecessary and disruptive nuisance actions and government regulations, while at the same time protecting the public health and safety. However, such laws alone do not appear to be effective in reducing the rate of farmland conversion.

2.2.2. Direct Methods

Direct farmland preservation methods include state or local programs in which the governmental unit has the authority and capacity to prevent conversion by excluding non-farm development activities. Examples of

direct methods to prevent farmland conversion include state-mandated restrictive zoning, the purchase or transfer of development rights, and executive- or legislative-imposed restraint of state agencies' acquisition of farmland for non-farm use.

2.2.2.1. Agricultural Zoning

The use of zoning designations to protect agricultural lands has been the most common and widespread method to limit the conversion of farmland. In the preceeding decade, over 270 counties and municipalities have used agricultural zoning to protect and preserve farmland. Agricultural zoning ordinances generally differ depending on whether new non-agricultural land uses are allowed into established agricultural zones. Agricultural zoning ordinances, therefore, fall into one of two basic categories: non-exclusive ordinances and exclusive ordinances.

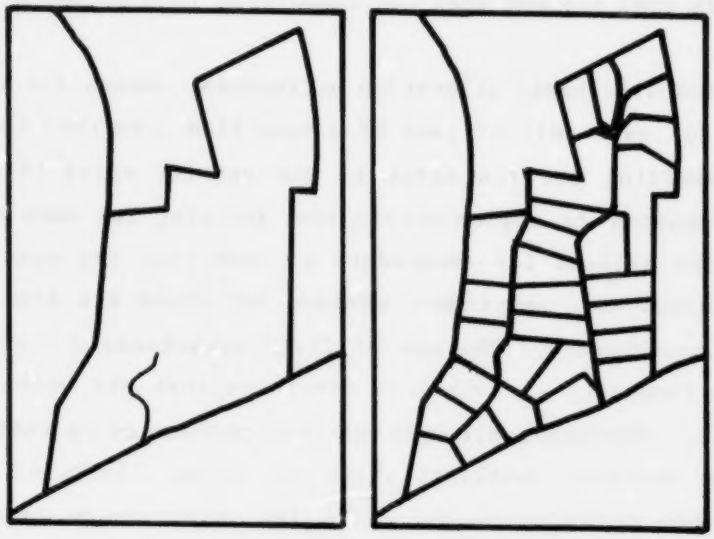
Non-exclusive agricultural zoning ordinances are by far the most popular approach to agricultural land protection. Non-farm dwellings are allowed, but agricultural uses are preferred. In these zones, non-farm dwellings may be permitted either conditionally or as-of-right. Four types of non-exclusive agricultural ordinances can be categorized:

- Large minimum lot size ordinances;
- Fixed area-based allocation ordinances;
- Sliding scale area-based allocation ordinances; and
- Conditional use zone ordinances.

Large minimum lot size zoning ordinances, as the name implies, require a substantial minimum lot size for single detached dwelling units. Lot sizes usually range from ten acres to as much as 640 acres (one square mile) (Figure 2-1). The intent of this type of zoning ordinance is to discourage non-farm uses in agricultural areas by making the purchase of land for housing too expensive for the average homeowner, while at the same time providing for a piece of land that is not too small for profitable farming. Generally the minimum lot size is related to the typical size of

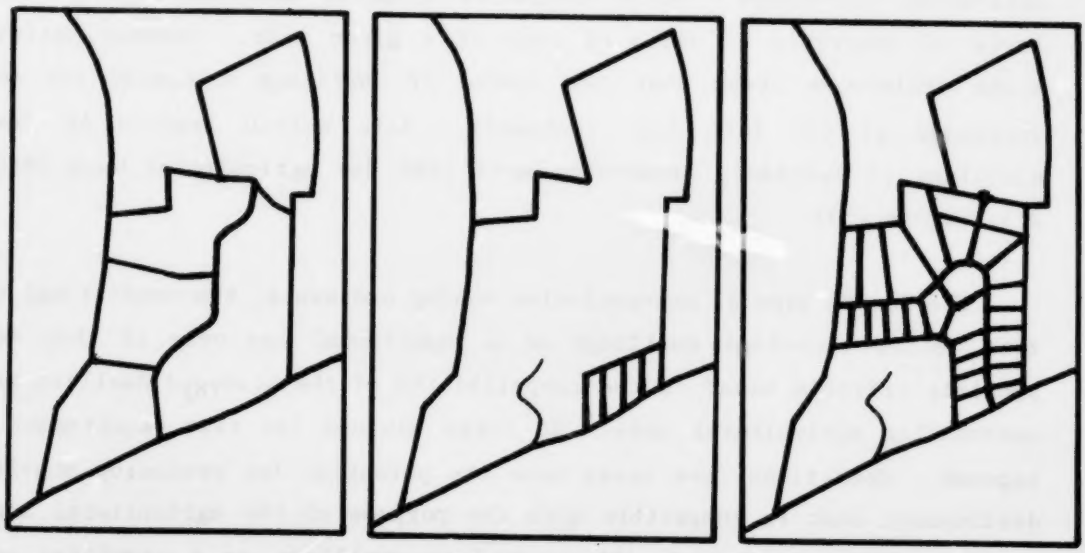
Figure 2-1. ALTERNATIVE RURAL DEVELOPMENT PATTERNS

Source: Adapted from Olney Master Plan (The Maryland National Park and Planning Commission, July, 1980)



Existing Farm

Existing Pattern of Five-acre Rural Zoning



Large Lot Agricultural Zoning (1 lot/25 acres)

Area-based Allocation Agricultural Zoning (1 dwelling/25 acres)

Rural Cluster (1 acre minimum lot size) 60% Open Space Preserved

commercial farming operations in the area or region. Where typical farming operations are conducted on small acreages, this type of ordinance is not effective. Minimum lot size ordinances can discourage most non-farm residences, but because the ordinances do not specifically exclude non-farm uses, they do not deter the development of "ranchettes," or five- to 20-acre parcels that are not used for commercial farm purposes.

In fixed area-based allocation ordinances, owners are allowed to build one house for each unit of land of a specified area that they own, ranging from one dwelling per ten acres to one per 160 acres (Figure 2-2). The median allocation is approximately one dwelling for each 40 acres owned. No units are allowed for remainders of less than the specified number of acres. Minimum and, sometimes, maximum lot sizes are also established as part of the ordinance. The use of fixed area-based allocation ordinances allows the community to establish densities that are suitable in agricultural areas. The major strength of such ordinances is that small lots can be used for non-farm dwellings while the larger blocks of farmland can be preserved for agricultural use. Housing units can be required to be located on non-farmable land or clustered in the most suitable areas.

Sliding scale area-based allocation ordinances are similar to fixed area-based ordinances. Both ordinances allocate building rights on the basis of ownership of units of land of a given area. However, sliding scale ordinances state that the number of dwellings allocated per acre decreases as the farm size increases. This method results in fewer dwellings on farmland, preserving more land for agricultural uses (Table 2-1; Figure 2-3).

The fourth type of non-exclusive zoning ordinance, the conditional use zone, allows non-farm dwellings as a conditional use only if they meet specific criteria based on the compatibility of the proposed dwelling with surrounding agricultural uses. No large minimum lot size requirement is imposed. Conditional use zones have the potential for producing non-farm development that is compatible with the purpose of the agricultural zone, because the zones do not allow non-farm dwellings as a permitted use.

Table 2-1. Numbers of dwelling units permitted in the sliding scale area-based allocation zone of Shrewsbury Township, Pennsylvania.

Size of Parcel	Dwellings Permitted by Ordinance	Resulting Density (dwelling units per acre)
0-5 acres	1	0.2 to 1.0+
5-15 acres	2	0.133 to 0.4
15-30 acres	3	0.1 to 0.2
30-60 acres	4	0.067 to 0.133
Over 60 acres	5 plus 1 dwelling for each additional 30 acres.	0.033 to 0.083

Exclusive agricultural zoning ordinances share the following characteristics:

- Non-farm dwellings are prohibited;
- The communities use a performance definition of a farm or farm use rather than defining a farm by a large minimum lot size or area-based allocation; and
- Each request to build a farm dwelling is reviewed on a case-by-case basis according to specific standards and criteria.

The primary advantage of exclusive agricultural zoning is that the conflict between residential and farm uses is minimized because non-farm dwellings are prohibited. The disadvantages of exclusive agricultural zoning are that such zones do permit, or conditionally permit, non-farm uses such as landfills, mining, cemetaries, and utility lines. Such zoning ordinances are also more expensive to administer because each proposed dwelling must be evaluated to determine if it meets the applicable criteria. Exclusive agricultural zoning ordinances are often difficult to adopt because they foreclose residential development to farmland owners.

In exclusive agricultural zones, and in non-exclusive zones where a proposed development does not meet existing criteria, a rezoning procedure

Figure 2-2. Dwelling Units Allowed per Parcel under a Quarter/Quarter Ordinance

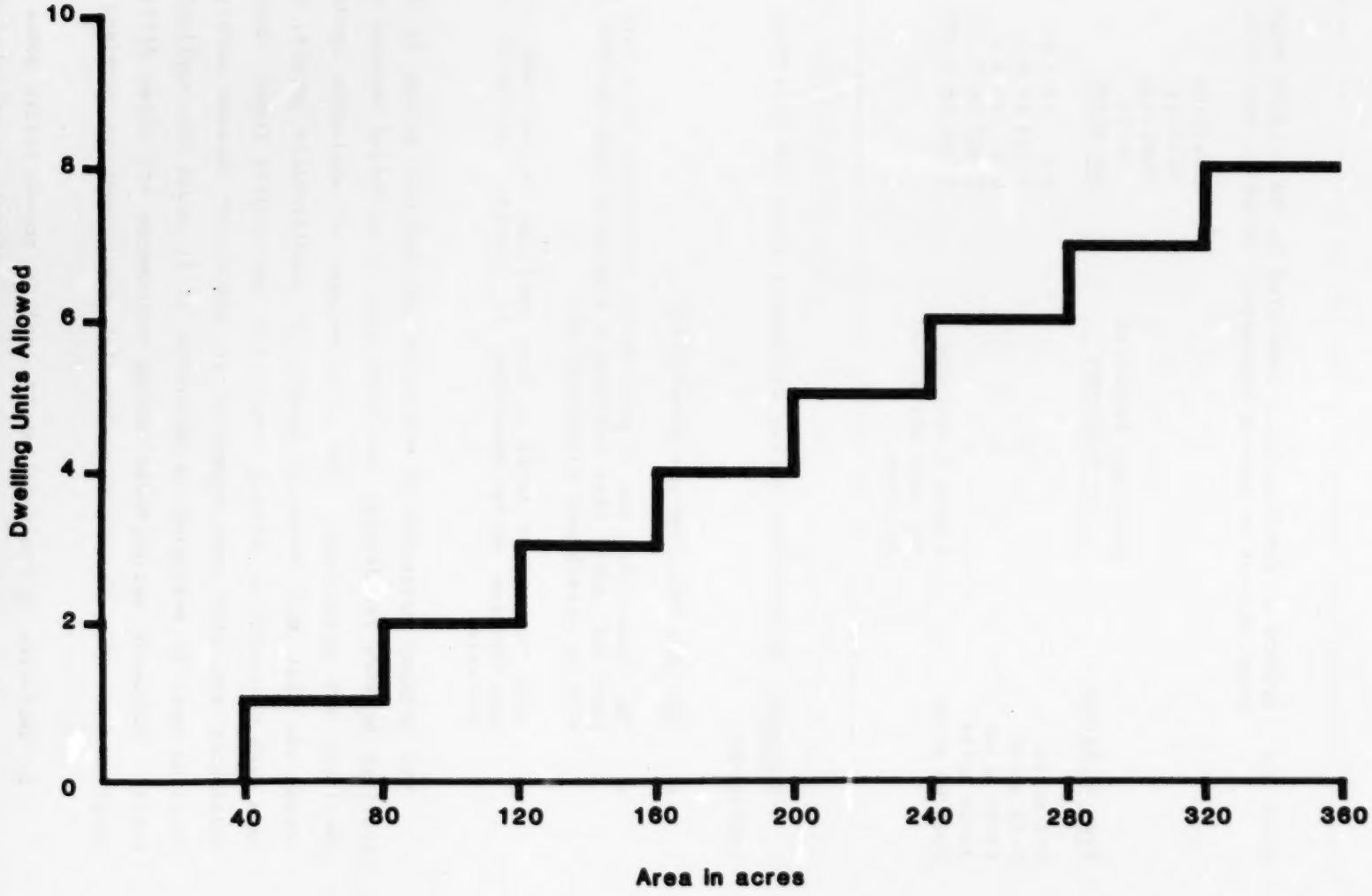
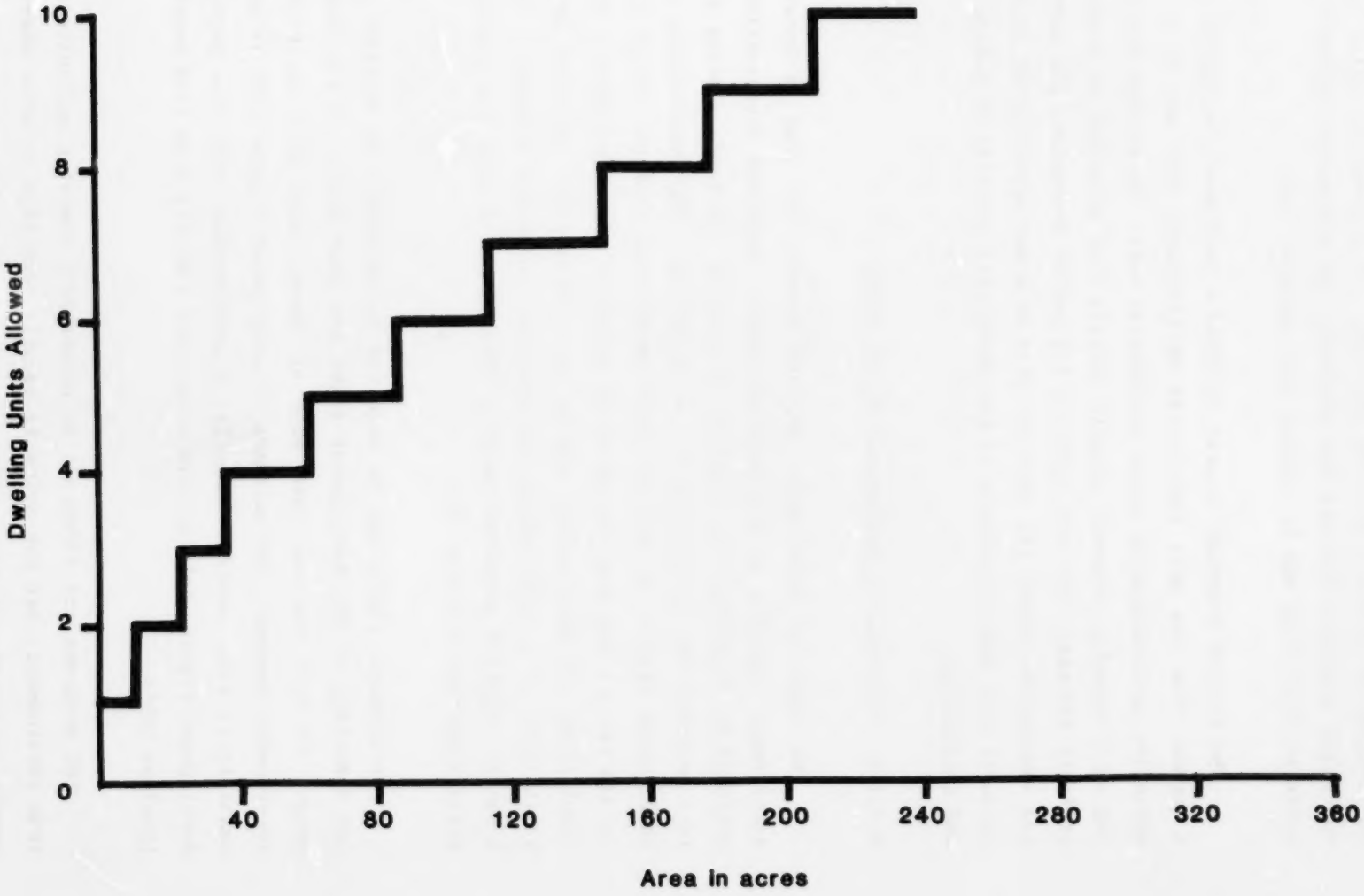


Figure 2-3. Dwelling Units Allowed per Parcel in the Sliding Scale Area-based Allocation Zone of Shrewsbury Township, Pennsylvania



is required to permit a non-farm dwelling If a community fails to develop and apply adequate criteria for rezoning, the protection accorded to agricultural activities may be reduced and, perhaps, lost.

The typical rezoning request involves a landowner who wishes to rezone a parcel from the most restrictive agricultural zone and to a less restrictive agricultural or rural residential zone. Guidelines for considering such rezoning requests usually contain five principal criteria. These criteria address: (1) soil quality; (2) parcel dimension; (3) parcel slope and vegetation cover; (4) conflict with adjacent agricultural or non-agricultural use; and (5) effects of the change (if granted) on public services and facilities.

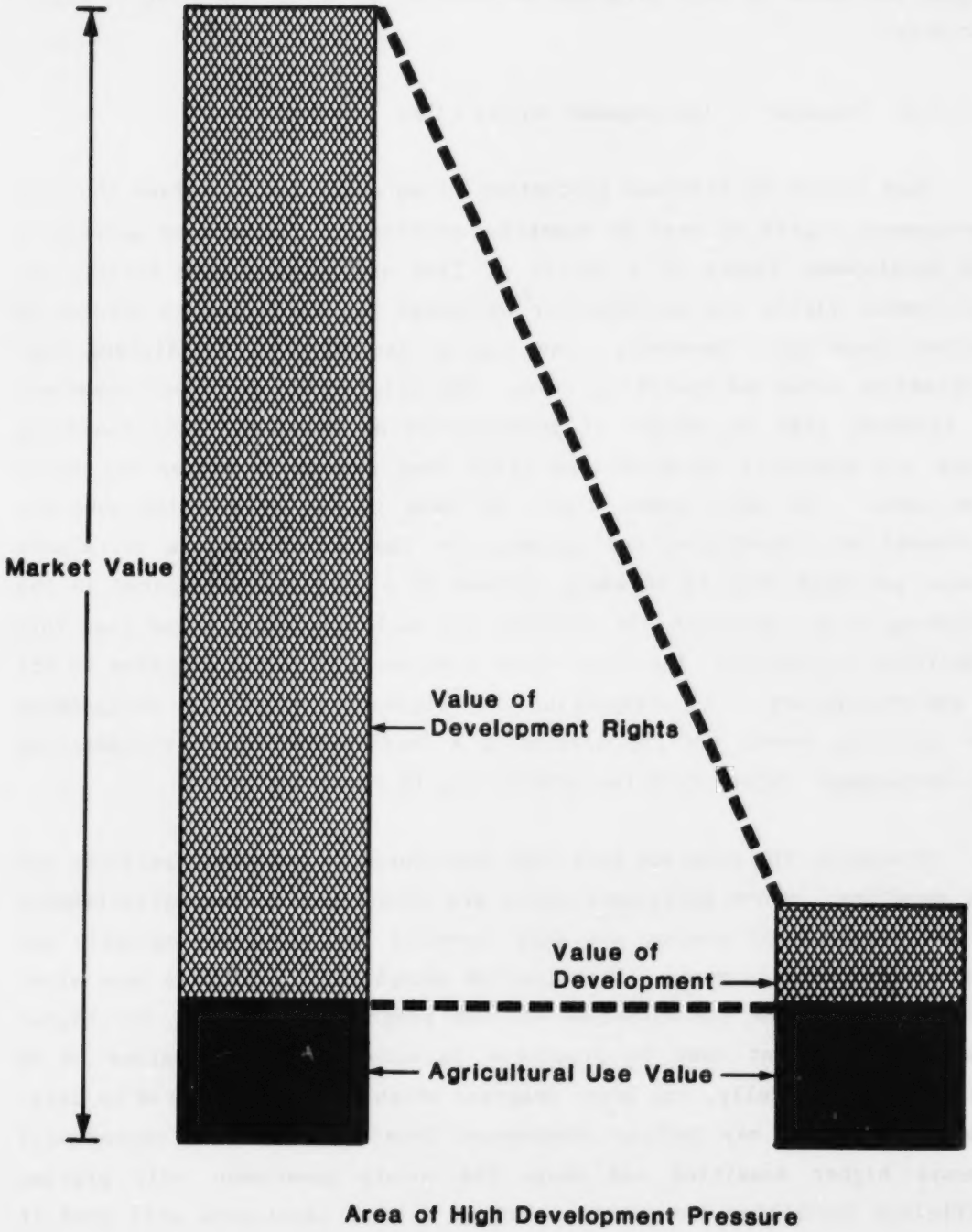
2.2.2.2. Purchase of Development Rights (PDR)

The right to build over, on, and beneath the land is known as the development right(s) of the property owner. Farmland preservation can be achieved by acquiring the right(s) to develop the land, leaving the farmland without the capability to be developed. The acquisition of these development rights, as well as their separation from the actual property, is similar to the acquisition of an easement on the property. Thus, the acquisition of development rights is alternatively referred to as the acquisition of a development, conservation, or scenic easement. These are known as negative easements because they simply prevent the landowner from doing something with his land.

Development rights may be acquired in two ways. An outright purchase (or donation) of the development right can take place, or the land can be bought in full fee and then sold or leased back with restrictions on development imposed. The purchase of development rights (PDR) is used more commonly in this country. Usually, a governmental body will purchase the development rights, holding them intact and removing them from possible use (Steiner 1981).

PDR programs are effective in permanently removing agricultural lands from development, but the price is usually very high in areas where development pressures are great (Figure 2-4). Funding for most programs comes

Figure 2-4. Relationship of the Value of Development Rights to Market Value and Agricultural Use Value



from the sale of general obligation municipal bonds, earmarked tax resources, and in some areas, matching funds from other governmental units. Regardless of the funding source, the cost per acre of protected land is high. As of 1981, approximately 10,300 acres of land have had development rights purchased by such programs nationwide, at an average cost of $1,848 per acre.

2.2.2.3. Transfer of Development Rights (TDR)

This method of farmland protection, also quite new, involves the same development rights of land as described previously. Instead of purchasing the development rights of a parcel of land and holding them intact, the development rights are purchased or exchanged for the right to develop in another location. Generally, land in a jurisdiction is divided into originating zones and receiving zones. The originating zones are comprised of farmland that is worthy of preservation as farmland. The receiving zones are basically non-sensitive areas that can be developed for urban land uses. The development rights of land in the originating zone are purchased by a developer, for instance, so that he or she can build more houses per acre than is normally allowed in a subdivision located in the receiving zone. Although TDR programs are much more complicated than this simplified explanation, the three basic components or tasks required to set up the program are: (1) designating the originating zones; (2) designating the receiving zones; and (3) developing a legal mechanism of transferring the development rights from the originating to receiving zones.

Presently, TDR programs have been instituted in ten municipalities and two counties. Other government units are investigating the establishment of TDR programs to protect not only farmland but other ecologically and historically fragile areas. With limited exceptions, developers have shown little interest in participation in TDR programs. A demand for higher density development must be presented in order for TDR programs to be successful. Hopefully, the newer programs which have been adopted by large suburban counties may include development locations where the market will support higher densities and where the county government will provide sufficient facilities and public services so that developers will find it profitable to purchase and transfer rights.

2 2.3. Integrated Programs

Integrated programs for agricultural land preservation combine both incentives and controls to form an overall program. The various elements of an integrated program may be administered from one level or from differing levels of government. As an example, an integrated program may be comprised of tax relief programs and right-to-farm legislation at the state level, and an agricultural zoning ordinance at the county or local level. On the other hand, an integrated program may be implemented solely from one level, such as the state level, where incentives and controls are provided in the form of preferential tax assessments; these incentives and controls are dependent on whether or not local governments adopt agricultural preservation plans or zoning controls. The number of combinations of such integrated programs is almost limitless and can be tailored to fit the particular needs of the area or subarea based on specific agricultural and development characteristics of the region.

In many areas the problem of agricultural protection can be addressed realistically and effectively only by considering its relation to the entire system of land use and development within a given region. In other words, the goal of protecting farmland must be balanced with other competing and supporting interests of the region, such as providing housing and jobs for current and future residents, protecting environmentally sensitive areas, providing adequate public services and facilities, and keeping fiscal expenditures at a minimum. The need to incorporate agricultural protection into an overall growth management program is especially important in metropolitan areas where development pressures on agricultural land are greatest.

2.3. Current Use Of Agricultural Land Preservation Methods

Because of the recent nationwide concern and publicity highlighting the farmland protection issue, all 50 states have enacted some form of legislation to assist farmers and/or prevent the conversion of farmland. Table 2-2 depicts the type of legislation presently in place in each state. The legislation is broken down according to seven broad categories: tax incentives; agricultural district enabling legislation; purchase of devel-

opment rights; transfer of development rights; agricultural zoning; right-to-farm legislation; and state policy statements or governors' executive orders.

As Table 2-2 indicates, all states, except Kansas, have some form of tax incentive program to assist farmers. Fifteen states use agricultural districting as a means of protecting agricultural land. Purchase of development rights legislation has been enacted in ten states, not including Michigan which has a modified version of this type of program. Only five states allow a transfer of development rights program; this type of method is relatively new and may be used more frequently in the future. Almost half (22) of the states allow agricultural zoning at either the county or local level. The right-to-farm laws are fairly common throughout the nation, with 37 states protecting farming with this method. Only 11 states have explicit policy statements that provide a basis for a concerted effort by state agencies to halt the conversion of farmland to other uses.

Table 2-2. Status and type of agricultural land protection legislation and methods used in the U.S.

State	Tax Incentives	Ag. Districts	Purchase of Dev. Rights	Transfer of Dev. Rights	Ag. Zoning	Right-To-Farm Laws	State Policy Statements
AL	•					•	
AK	•						
AZ	•	•				•	
AR	•					•	
CA	•	•			•		
CO	•				•	•	
CT	•		•	•		•	
DE	•					•	•
FL	•					•	
GA	•					•	•
HI	•	•			•		
ID	•	•			•	•	
IL	•	•			•	•	•
IN	•				•	•	•
IA	•	•			•		
KS					•		
KY	•	•				•	•
LA	•						
ME	•				•	•	
MD	•	•	•	•	•	•	
MA	•		•	•		•	•

Table 2-2. Status and type of agricultural land protection legislation and methods used in the U.S. (continued)

State	Tax Incentives	Ag. Districts	Purchase of Dev. Rights	Transfer of Dev. Rights	Ag. Zoning	Right-To-Farm Laws	State Policy Statements
MI	•				•	•	
MN	•	•			•		•
MS	•					•	
MR	•					•	
MT	•					•	
NB	•				•		
NV	•						
NH	•		•			•	
NJ	•	•	•		•	•	
NM	•					•	
NY	•	•	•	•		•	
NC	•					•	
ND	•				•	•	
OH	•	•					
OK	•					•	
OR	•				•	•	•
PA	•	•	•	•	•	•	•
RI	•		•			•	
SC	•				•	•	
SD	•						
TN	•					•	

Table 2-2. Status and type of agricultural land protection legislation and methods used in the U.S. (concluded)

State	Tax Incentives	Ag. Districts	Purchase of Dev. Rights	Transfer of Dev. Rights	Ag. Zoning	Right-To-Farm Laws	State Policy Statements
TX	•					•	
UT	•				•	•	
VT	•					•	•
VA	•	•				•	
WA	•	•	•		•	•	•
WV	•		•				
WI	•				•	•	
WY	•				•		
Total. No.	49	15	10	5	22	37	11

Source: Farmland - the newsletter of the American Farmland Trust Vol. 3, No. 2

3 0. OVERVIEW OF FEDERAL POLICIES AND REGULATIONS

The Federal government administers a variety of programs that affect land use at the state and local levels. Federal projects and federally-assisted projects for highways, housing, water resource development, wastewater treatment, and other public works projects have often directly or indirectly contributed to the conversion of agricultural land uses. Until the mid-1970s little attention was focused upon the problem of conversion of agricultural land as a result of federal actions. This chapter identifies and describes the specific federal regulations and policies that have been developed to protect agricultural lands from conversion pressures.

3.1. Federal Regulations

The two major federal regulations which address the issue of agricultural land protection are the Farmland Protection Policy Act and the National Environmental Policy Act; both of these acts are described below.

3.1.1. Farmland Protection Policy Act

The Farmland Protection Policy Act, Subtitle I of Title XV of the Agriculture and Food Act of 1981 (P.L. 97-98) establishes a national policy to minimize the extent to which Federal government programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. This Act proposes to assure that all Federal programs are administered in a manner which will be compatible with public and private programs and policies that protect and preserve farmland.

The Act authorizes the Department of Agriculture (USDA), in conjunction with other Federal agencies, to establish criteria and procedures for identifying the effects and potential impacts of Federal programs on the conversion of farmland to nonagricultural uses. Specifically, all Federal agencies are required to use the following criteria:

1. To identify and take into account the adverse effects of Federal programs on the preservation of farmland;

2. To consider alternative actions, as appropriate, that could lessen such adverse effects; and

3. To assure that such Federal programs, to the extent practicable, are compatible with state and local government and private programs and policies to protect farmland (Section 1541(b) of the Act (7 U.S.C. 4202(b)).

The identification of possible federally funded adverse effects on farmland included such actions as the review of current laws, rules and regulations, policies and procedures by all Federal departments, agencies, independent commissions and other units of government (Section 1542 of the Act (7 U.S.C. 4203)).

Remaining sections of the Act provide for technical assistance, the establishment of farmland information centers, and the authority to issue grants and contracts to carry out the purposes of the Act. Two significant limitations are also written into the Act. The Act applies only to Federal agencies and Federal programs; the Act has no bearing whatsoever on preventing private landowners from converting their property to nonagricultural uses. In addition, the Act cannot be used as a basis for any legal, or other action, by any state or local government, or person or class of persons challenging a Federal project, program, or other activity which may adversely affect farmland.

The draft rules for the implementation of the Farmland Protection Policy Act were published on July 12, 1983, in the Federal Register (Vol. 48, No. 134, 31863-31866). The proposed rule, Part 658 of this Act, contains authorization for three major activities: (1) the establishment of criteria for determining potential adverse effect to farmland; (2) guidelines for use of the above-mentioned criteria, and (3) the provision of technical assistance. These three activities are discussed briefly below.

The criteria for determing potential adverse effect to farmland are addressed by the proposed rule in two ways. First, five land evaluation criteria are examined by the USDA, Soil Conservation Service (SCS). Based on detailed information about the significance of the site and the amount of potential farmland that may be lost by a proposed project, the SCS will

assign each parcel of farmland an overall score between 0 and 100; the higher the score, the greater the land's value as farmland. The second set of criteria involves 16 site assessment criteria. These criteria are to be used by the Federal agencies in assessing the suitability of each proposed site for protection as farmland. Each criteria will be given a score on a scale of 0 to 10, with 10 representing the most suitable use as farmland. These criteria address, for example, the land use of adjacent parcels, other protective measures that may be in place, the relation of the proposed project to other comprehensive plans for the area, the availability of utilities and other needed public facilities, and the present and proposed farming practices.

According to the proposed rule, for each proposed Federally-funded project which may have an adverse effect on farmland, the following processes must take place:

1. The SCS will measure the relative value of the site as farmland, in accordance with the land evaluation criteria.

2. The individual Federal agencies will measure the suitability of the site for protection as farmland according to the site evaluation criteria.

3. The score from the land evaluation and site evaluation will be combined for USDA use and analysis.

4. Many states and local governments have developed and adapted Land Evaluation and Site Assessment (LESA) systems to evaluate the productivity of agricultural land and suitability or nonsuitability for conversion to nonagricultural use. These LESA are prepared with the assistance of the SCS. In cases where a proposed project is located within an area that has already been examined by the LESA, the USDA will analyze the LESA evaluation.

Part 658 of the Act specifies that USDA will provide technical assistance to states, units of local government, and nonprofit organizations in developing their programs or policies to protect farmland from unnecessary conversion. This technical assistance may include the availability of maps and soils information; the preparation of LESAs; the provision of aerial photography, crop history data and related information; the identification of farmland protection issues and problems, including resolving conflicts, developing alternatives, deciding on appropriate actions and implementing those decisions.

In summary, the Farmland Protection Policy Act is based largely on the findings and recommendations of the National Agricultural Lands Study (NALS) which was sponsored by the DOE and the Council of Environmental Quality (CEQ). The purpose of the NALS is to determine the availability of the nation's agricultural lands, the extent and causes of their conversion to other uses, and ways in which these lands might be retained for agricultural purposes. Critics have recently charged the study with the careless or deceptive use of statistics concerning the quantity of agricultural land converted in the past and projected to be converted in the future. Continued criticism of the NALS could eventually erode support for the Act.

3.1.2. National Environmental Policy Act

The National Environmental Policy Act (NEPA; 41 USC, 4321-4347, Section 102) provides the legislative mandate for environmental planning and assessment. Section 102 provides for the consideration of environmental impacts resulting from major Federal actions significantly affecting the quality of the human environment. This requirement is the basis for the environmental impact statement (EIS). The Act also includes the requirement that a detailed statement be developed which addresses the relationship between local short-term use of man's environment and the maintenance and enhancement of long-term productivity, as well as any irreversible or irretrievable commitments of resources which would be involved in preposed actions should such actions be implemented. NEPA provides the basic foundation for Federal involvement in agricultural land protection.

3.2. Federal Policies, Authorities, and Legislative Background

The Federal policies and authorities dealing with agricultural land preservation are found most commonly in the Council on Environmental Quality, the USDA, and the USEPA. These agencies are described below, as they relate to this issue.

3.2.1 Council on Environmental Quality (CEQ) - Memorandum for Heads of Agencies - Analysis of Impacts on Prime and Unique Farmland in Environmental Impact Statements. August 30, 1976.

This original memorandum on agricultural land protection directed Federal agencies to attempt to determine the existence of prime and unique farmlands in the areas of impact analyzed in environmental impact statements as required by NEPA regulations. The importance of such farmlands was stressed and procedures for inter-agency contact and coordination were outlined.

3.2.2. Council on Environmental Quality - Memorandum for Heads of Agencies - Analysis of Impacts on Prime and Unique Agricultural Lands in Implementing the National Environmental Policy Act. August 11, 1980.

This memorandum updates and supercedes the August 30, 1976, CEQ memo mentioned above. Rather, this memorandum was developed in response to studies which indicated that Federal agencies had not adequately assessed potential project impacts on agricultural lands. The memo suggests that agencies closely follow CEQ and NEPA regulations, and further states that the assessment of effects on prime and unique farmlands must be made an integral part of the environmental assessment process and must be addressed in deciding whether or not to prepare an EIS. An EIS is required if significant effects to prime or unique farmlands may occur as a result of an action. According to this memorandum, the USDA is directed to cooperate with all Federal agencies in planning projects, assessing impacts and defining alternatives which serve to protect and preserve farmland. USDA is further directed to provide technical assistance and review EISs regarding potential impacts on prime and unique farmland. Where USDA review of proposed Federal actions determines adverse impacts to farmlands, the proposed action is referred to CEQ for further information.

3.2.3. US Department of Agriculture Secretary's Memorandum - No. 1827, Supplement 1, Statement of Prime Farmland, Range, and Forest Land. June 21, 1976.

This memorandum outlines USDA's concern for the irretrievable conversion of prime agricultural lands to other non-farm uses. Six policy recommendations were issued to guide the agency's actions concerning such lands. These policies place the agency in an advocacy position concerning preser-

vation of prime farmlands; make the agency responsible for assuring that environmental impact statements and reviews adequately address the issue of prime farmlands; and place emphasis on both cooperative programs with other agencies and USDA programs to increase concern and interest for the retention of prime lands.

3.2.4. US Department of Agriculture Secretary's Memorandum - No. 9500-3, Land Use Policy, March 22, 1983.

This memorandum acknowledges the importance of preserving America's unique natural reaources, including farmlands, forest lands, range lands, flood plains and wetlands. According to this memo, USDA has adopted the policy of promoting land use objectives which (1) retain a farm, range and forest land base sufficient to produce an adequate national supply; (2) assist individual landholders and state and local governments in defining and meeting needs for growth and development in such ways that the most productive farm, range and forest lands are protected from unwarrented conversion to other uses; and (3) assure appropriate levels of environmental quality. In promoting the abovementioned land use objectives, USDA attempts to manage its own programs and lands according to these goals. Additionally, USDA conducts a wide variety of multidisciplinary research and public education programs on these issues, and assists in various planning efforts that may directly or indirectly have a negative impact on the Nation's farmlands. USDA further acts as an advocate among Federal agencies with regard to issues involving either the retention of important farmlands, rangelands, forestlands, and wetlands, or the reduction of the risk of flood loss and soil erosion.

This memorandum supercedes Secretary's Memorandm 8500-2, dated March 10, 1982.

3.2.5. US Environmental Protection Agency - USEPA Policy to Protect Environmentally Significant Agricultural Lands. September 8, 1978.

This document establishes USEPA policy regarding the protection of certain agricultural land types. The document recognizes the food production and environmental value of agricultural lands, and the necessity to protect them from impacts in the implementation of programs administered by USEPA. The policy is intended to guide USEPA actions, regulations, program guidance, and technical assistance to reduce or eliminate adverse impacts, and to encourage farmland protection efforts which are consistent with environmental quality goals.

This USEPA policy defines seven categories of environmentally significant agricultural lands: prime farmland; unique farmland; additional farmland of statewide importance; additional farmland of local importance; farmlands in or contiguous to environmentally sensitive areas; farmlands of waste utilization importance; and farmlands with significant capital investments in Best Management Practices (BMP). The specific directions for USEPA action include the following:

- Specific project decisions involving the planning, design, and construction of sewer interceptors and treatment facilities should consider farmland protection. Consistent with USEPA cost-effectiveness guidelines, interceptors and collection systems should be located on agricultural land only if necessary to eliminate existing discharges and serve existing habitation.

- USEPA permit actions which are subject to NEPA review shall ensure that the proposed activity will not cause conversion of environmentally significant agricultural land. The permit process shall consider farmland protection alternatives and ensure that the least damaging environmental alternative is implemented.

- Primary and secondary impacts on agricultural land shall be determined and mitigation measures recommended in environmental assessments and reviews of environmental impact statements of USEPA decisions, and reviews of action proposed by other Federal agencies.

- Agricultural land protection efforts of states, local governments, or other Federal programs shall be supported through intergovernmental coordination and USEPA project reviews. Opportunities for review and comment on proposed USEPA actions that impact agricultural land shall be made available.

- The regional or local significance and economic value of farmlands to communities shall be considered in USEPA enforcement actions.

- USEPA technical assistance activities in the development of air quality, water quality, and solid waste plans shall support and encourage state and local government agricultural land protection programs. Significant farmlands recognized in these programs shall be incorporated into USEPA-required environmental plans and implementation approaches.

The responsibility for implementing USEPA's agricultural land protection policy rests with each agency program and Regional Office. The Office of Federal Activities has the responsibility for monitoring implementation of the policy and for reporting progress made in carrying out the policy.

3.2.6. US Environmental Protection Agency - Implementation of Procedures on the National Environmental Policy Act, 40 CFR Part 6.

Section 6.302(c) of Subpart C states that before undertaking an action, the responsible USEPA official shall determine whether there are significant agricultural lands in the planning area. If significant agricultural lands are identified, the direct and indirect effects of the undertaking on the land shall be evaluated and adverse effects avoided or mitigated, to the extent possible, in accordance with USEPA's Policy to Protect Environmentally Significant Agricultural Lands.

4.0. STATE AGRICULTURAL LAND PRESERVATION POLICIES AND REGULATIONS IN REGION V.

4.1. Illinois

Illinois' program for farmland protection is comprised at the present time of tax incentives, agricultural districts, agricultural zoning at the county and local levels, right-to-farm legislation, and an Executive Order of the Governor and accompanying State Act directing most State agencies to establish an agricultural land preservation policy. These components are discussed in the following sections.

4.1.1. Tax Incentives

In the early 1970s, landowners and governmental officials began to note a significant increase in the value of Illinois agricultural land. From November 1974 to November 1976, inflation caused a 70 percent increase in the average value of farmland in the State (Gardner 1980). This inflation in farmland values not only affected the purchase of such land, but also the amount of property taxes that the farmers were required to pay. The increased tax burden on farmland prompted the passage of the Farmland Assessment Law of 1977. This legislation provided for the assessment of farmland to be based on the productivity of the land as farmland and not on its value for other types of uses. The differential assessment system was designed to reduce the pressure to convert farmland to other more profitable uses because of the property tax burden. If a farmland owner decides to convert his farmland to a non-qualifying use, he or she is required by the law to refund the tax money he did not pay for the previous three years, plus five percent interest.

4.1.2. Executive Order and Farmland Preservation Act

An important turning point for farmland protection in Illinois occurred on July 22, 1980 when Governor James R. Thompson signed Executive Order Number 4, entitled Preservation of Illinois Farmland. This Executive Order and the Act that makes it law, the Farmland Preservation Act (Public Act

82-945, 19 August 1982) are the cornerstones of farmland protection in the State. The Act requires the preparation of policy statements concerning farmland protection by each of the nine state agencies that may potentially impact farmland through their various programs. These State agencies include:

- Capital Development Board;
- Department of Conservation;
- Department of Commerce and Community Affairs;
- Department of Energy and Natural Resources;
- Environmental Protection Agency;
- Department of Mines and Minerals;
- Department of Transportation;
- Bureau of the Budget;
- Illinois Commerce Commission; and
- Department of Agriculture.

These policy statements were to have been approved and implemented by July 22, 1982, and include an analysis of the impact on farmland conversions as a result of agency actions, measures to be used by the State agencies to mitigate such impacts, and the requirement that the greatest degree of protection be given to Class I, II, and III lands.

An Inter-Agency Committee on Farmland Preservation was formed as directed by the Executive Order and Act. This Committee, composed of representatives of the nine state development agencies, was created to discuss initial problems in formulating and implementing the required policy statements, and to develop guidelines for the preparation of Agricultural Impact Statements (AISs). Other tasks performed by the Committee include the development of a conflict resolution process and the definition of criteria for irreversible conversion.

The Illinois Department of Agriculture (DOA) was directed by the Executive Order to become the lead agency in enforcing farmland preservation. The DOA is responsible for reviewing the development projects proposed by State agencies for compliance with the Executive Order and accompanying Act. To fulfill this responsibility, the DOA has prepared guidelines for an AIS which is conducted when a State project does not conform to the provisions of the Executive Order and Act, and the sponsoring agency will not or cannot bring the proposed project into compliance. The AIS is submitted to the Governor's Office for review and consideration on funding

of such projects. The DOA also reviews Federal government agencies' projects to assess impacts on farmland and provides comments on proposed projects. Other activities and duties of the DOA include providing assistance to local governments in creating agricultural protection areas, providing farmland protection information to interested parties, and providing assistance to other State agencies or individuals involved in projects on behalf of State agencies.

4.1.3. Agricultural Districts

Illinois has had enabling legislation for the creation of agricultural protection districts since 1979. Public Act 81-1173, the Agricultural Areas Conservation and Protection Act provides for the establishment of such districts or areas in order to conserve, protect and encourage the development and improvement of Illinois agricultural lands for the production of food and other agricultural products.

The agricultural areas program initiated by this Act is based on a county-level initiative. Local farmers may petition their county board to establish a county Agricultural Areas Committee. Such a committee consists of four active farmers with no more than two of the same political party, and one member of the county board. Qualified owners of farmland may submit a proposal for the creation of an agricultural area to the county board. The agricultural area must be at least 500 acres in size, as compact and contiguous as possible, and is established for a period of ten years. Inclusion in the area is on a strictly voluntary basis. If the area or any part of the area is within 1½ miles from a municipality, that municipality must be notified. If the municipality objects to the agricultural area formation, then the portions within 1½ miles of the municipal limits are excluded from the area. After a formal public notice period and public hearing, the area is formally approved and established.

The advantage of participating in an agricultural area for Illinois farmers is two-fold. First, land in the agricultural area is protected from local laws or ordinances that would unreasonably restrict or regulate farm structures or farming practices unless the public health or safety is

endangered. Second, agricultural areas are exempted from all new benefit assessments and special ad valorem tax levies. Therefore, the farmer receives protection from possible nuisance ordinances that might affect his or her farming operations, and is assured that special taxes for urban services that he or she has no use for will not be levied on the farm property.

4.1.4. Right-to-Farm Legislation

Illinois provides farmers with protection against nuisance suits through Public Act 82-509 which became effective on 16 September 1981. This Act recognizes that as nonagricultural land uses extend into farming areas, the farmers are often subjected to nuisance suits by nearby non-farm residents. The Act protects farmers from nuisance suits by declaring that no farm shall be or become a private or public nuisance after it has been in operation for more than one year, when the farm was not considered a nuisance at the time it began operation. However, the Act does not protect the farmer from nuisance suits that result from negligent or improper operation of the farm or farm equipment or the pollution of rivers and streams by farm operations.

4.1.5. Agricultural Zoning

The final element of the agricultural land protection framework in Illinois is agricultural zoning. Such zoning ordinances are administered at the county and municipal level and, therefore, vary in design and effectiveness from one jurisdiction to another. An example of one of the Illinois county ordinances is that of McHenry County. McHenry County's policy of protecting agricultural land is carried out through implementation of the A-1 and A-2 Agricultural Zoning Districts (ARADAS in IENR 1982). The A-1 Agricultural District restricts land uses that would conflict with agricultural activities by requiring a minimum lot size of 160 acres. The A-2 Agricultural District allows residential development only after the applicant has proven to the Zoning Board of Appeals and the County Board that the property is unsuitable for agriculture. Another feature of the McHenry County Zoning Ordinance is an attempt to offer certain farming operations some protection from nuisance suits. An intensive use criteria

section is contained in the ordinance which allows the operator of intensive agricultural operations, such as feedlots, dairy facilities, grain drying, etc., to submit an affidavit to the zoning enforcement officer indicating the intensive use activity and its location. The location is indicated on the zoning map in order to warn a potential nearby property buyer of the presence of such an activity.

4.2. Wisconsin

Wisconsin's efforts at agricultural land preservation have several aspects: the Wisconsin Farmland Preservation Program, the State Agricultural Impact Statement Program and the Wisconsin Right-to-Farm Law. These elements are discussed below in the following sections.

4.2.1. Wisconsin Farmland Preservation Program

The Wisconsin Farmland Preservation Program is based on the Wisconsin Farmland Preservation Act which went into effect in December of 1977. The program is designed to encourage counties and other local governments to adopt agricultural preservation plans and zoning ordinances to protect farmland. The encouragement is achieved by offering significant state income tax incentives to farmers if the applicable jurisdiction has enacted a zoning ordinance that regulates non-farm uses or has an agricultural preservation plan. The tax incentives increase as the county or municipality adopts stronger protection measures. The landowner applies for, and may receive, a "farmland preservation agreement" or "transition area agreement". This agreement is a restrictive covenant whereby the landowner and the State of Wisconsin agree to hold jointly the right to develop the land.

The Wisconsin program was designed in two phases, and is now in the second phase. During the first phase (1977-1982) individual farmers could qualify for tax credits if they contracted with the State not to develop their land for non-farming purposes. The second phase requires county or other local government action (in the form of comprehensive planning and/or zoning) in order for farmers to qualify or continue to qualify for the tax credits.

Landowners may qualify for participation in the program if they own 35 acres or more of land in agricultural use which produced at least $6,000 in gross profits in the last year, or $18,000 over the past three years. Qualifying landowners must also be residents of the State of Wisconsin. Furthermore, qualifying landowners must hold land which is located in a county with a certified agricultural preservation plan in effect, or else the land must be located in an area zoned for exclusive agricultural use. In cases where the local jurisdiction has adopted a certified exclusive agricultural use zoning ordinance, a landowner may apply for a farmland preservation agreement only if the land is in an area zoned for exclusive agriculture.

Under the first phase program (until a county enters the second stage of the program), farmers whose land is included in the program are eligible for tax credits against their State income tax. The amount of the credit is based on the household income level, and whether or not the county has an agricultural plan, exclusive agricultural zoning, or both. Under the second phase program, different conditions must be met by farmowners in rural counties and urban counties. In rural counties, which are defined as having a population density of 100 persons per square mile or less, a farmer can qualify for:

a. 70 percent of maximum tax credit if the county has an agricultural preservation plan and the farmer signs a long-term contract;

b. 70 percent of maximum tax credit without signing a contract if the county adopts exclusive agricultural zoning and the farm is so zoned;

c. 70 percent of maximum tax credit if the county has an agricultural preservation plan and if the farmowners in the identified transition areas sign a special transition area contract;

d. 100 percent of the tax credit without signing a contract if the county has both zoning and an agricultural preservation plan.

e. 70 percent of the maximum level of credit if the county has an agricultural preservation plan and if the town has adopted its own exclusive agricultural zoning orginance (approved by the Land Conservation Board (LCB) and the land is located within an exclusive agricultural zone; and

f. 70 percent of the maximum level of credit of the county has no zoning ordinance, yet the town adopts an exclusive agricultural zoning ordinance (certified by the LCB), the land is located within an exclusive agricultural zone and the farmowner signs a long-term contract.

In addition, a simple tax credit based on ten percent of the total property taxes -- up to $6,000 of property taxes (or $600 credit) -- is available for the farmer located in an exclusive agricultural zone if the farmer's income is too high for formula credit. A long-term contract as specified by the program has a duration for from 10 to 25, years and requires a farm conservation plan to be in effect on the land during that time or request that a plan be prepared by the local soil and water conservation district and SCS. The maximum tax credits available to farmers are indicated in Table 4-1, and are based on income level and the magnitude of real estate taxes on farm property.

In urban counties, where population densities exceed 100 persons per square mile, a farmer is eligible for the tax credits only if his or her land is zoned for exclusive agricultural use; under this condition, the farmer qualifies for 70 percent of the maximum tax credit available. If the farm is zoned for exclusive agriculture use and is also covered by a county agricultural preservation plan, the farmer is eligible for 100 percent of the maximum tax credits. It is important to note that the exclusive agricultural zoning ordinances enacted by counties and local government units must be certified by the LCB in order to assure that the ordinances meet minimum requirements according to the law.

Once a farmer participates in the program, he or she must pay a penalty or rollback payment in order to be removed from the program. The farmer is required to repay the tax credits over the preceding ten years if any of the following situations occur: (1) the contract expires and no new contract is signed, (2) the land is removed from the exclusive agricultural zone, or (3) other actions are taken that disqualify the land from participation in the program. In such cases, if the payment is made immediately, no interest is charged, but if payment is delayed, a six percent interest rate is applied from the time of removal from the program. Pay-

Table 4–1. MAXIMUM TAX CREDIT SCHEDULE: FARMLAND PRESERVATION LAW*

Income from line 5 of worksheet	Real Estate Taxes (on land and improvements covered by the agreement)																							
	250	500	750	1,000	1,250	1,500	1,750	2,000	2,250	2,500	2,750	3,000	3,250	3,500	3,750	4,000	4,250	4,500	4,750	5,000	5,250	5,500	5,750	6,000
$1 or less	225	450	675	900	1,125	1,350	1,575	1,800	1,975	2,150	2,325	2,500	2,675	2,850	3,025	3,200	3,325	3,450	3,575	3,700	3,825	3,950	4,075	4,200
2,500 ..	225	450	675	900	1,125	1,350	1,575	1,800	1,975	2,150	2,325	2,500	2,675	2,850	3,025	3,200	3,325	3,450	3,575	3,700	3,825	3,950	4,075	4,200
5,000 ..	225	450	675	900	1,125	1,350	1,575	1,800	1,975	2,150	2,325	2,500	2,675	2,850	3,025	3,200	3,325	3,450	3,575	3,700	3,825	3,950	4,075	4,200
7,500 ..	67	292	517	742	967	1,192	1,417	1,642	1,852	2,027	2,202	2,377	2,552	2,727	2,902	3,077	3,237	3,362	3,487	3,612	3,737	3,862	3,987	4,112
10,000 ..	0	135	360	585	810	1,035	1,260	1,485	1,710	1,905	2,080	2,255	2,430	2,605	2,780	2,955	3,130	3,275	3,400	3,525	3,650	3,775	3,900	4,025
12,500 ..	0	0	157	382	607	832	1,057	1,282	1,507	1,732	1,922	2,097	2,272	2,447	2,622	2,797	2,972	3,147	3,287	3,412	3,537	3,662	3,787	3,912
15,000 ..	0	0	0	180	405	630	855	1,080	1,305	1,530	1,755	1,940	2,115	2,290	2,465	2,640	2,815	2,990	3,165	3,300	3,425	3,550	3,675	3,800
17,500 ..	0	0	0	0	157	382	607	832	1,057	1,282	1,507	1,732	1,922	2,097	2,272	2,447	2,622	2,797	2,972	3,147	3,287	3,412	3,537	3,662
20,000 ..	0	0	0	0	0	135	360	585	810	1,035	1,260	1,485	1,710	1,905	2,080	2,255	2,430	2,605	2,780	2,955	3,130	3,275	3,400	3,525
22,500 ..	0	0	0	0	0	0	0	202	427	652	877	1,102	1,327	1,552	1,777	1,957	2,132	2,307	2,482	2,657	2,832	3,007	3,182	3,312
25,000 ..	0	0	0	0	0	0	0	0	45	270	495	720	945	1,170	1,395	1,620	1,835	2,010	2,185	2,360	2,535	2,710	2,885	3,060
27,500 ..	0	0	0	0	0	0	0	0	0	0	0	112	337	562	787	1,012	1,237	1,462	1,687	1,887	2,062	2,237	2,412	2,587
30,000 ..	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180	405	630	855	1,080	1,305	1,530	1,755	1,940	2,115
32,500 ..	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	247	472	697	922	1,147	1,372
35,000 ..	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	315	540
37,500 ..	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40,000 ..	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*Based on the law as amended August 16, 1981

Actual credit received by farmer:
Initial contract = 50% of these amounts;
Exclusive agricultural zoning
OR county agricultural plan plus long-term contract = 70% of these amounts;
Zoning plus an agricultural preservation plan = 100% of these amounts.

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back is not due until the land is sold or developed. If a contract is cancelled early, as agreed by the farmer, county and state, in accordance with statutory limitations, the six percent interest rate is applied from the time tax credits were received. Otherwise, if a farmer continues to participate in the program, no credits are repaid. It should be noted that farmers participating in the Farmland Preservation Program are exempt from new special assessments for sanitary sewers, water, lights or nonfarm drainage on land zoned exclusively for agricultural use.

The Farmland Preservation Program in Wisconsin is supervised by the LCB which is made up of the secretaries of the State Department of Agriculture, Trade and Consumer Protection, the Department of Administration, the Department of Natural Resources, and five public members. The five public members include three county Land Conservation Committee members designated by the Wisconsin Land Conservation Association and two members appointed by the Governor. The LCB allocates funds and establishes administrative policy, certifies county agricultural preservation plans and zoning ordinances, and acts on appeals and cancellations of farmland preservation contracts. The Farmland Preservation Section of the Land Resources Bureau of the Wisconsin Department of Agriculture, Trade, and Consumer Protection is staffed by four persons who implement the day-to-day administrative functions of the program including the issuing of farmland preservation contracts, recordkeeping, local technical assistance, plan/ordinance review, and providing information about the program to individuals and government officials.

In reviewing zoning ordinances for approval in the program, the LCB must determine that the ordinance qualifies as an "exclusive agricultural use ordinance." The following criteria are used to assess proposed ordinances:

- The minimum parcel size to establish a resident or farm operation is 35 acres.
- The only residences allowed as permitted uses are those to be occupied by a person who, or a family with at least one member of which, earns a substantial part of his or her livelihood from farm operations on the land parcel, or is a parent or child of the operator of the farm.

- No structure or improvement may be built on the land unless it is consistent with agricultural uses.

- Such ordinances shall be considered local ordinances and shall provide that gas and electric utility uses are permitted as conditional uses and do not conflict with agricultural use.

- Special exceptions and conditional uses are limited to those agricultural-related, religious, other utility, institutional, or governmental uses which do not conflict with agricultural use and are found to be necessary in light of the alternative locations available for such uses.

- For purposes of farm consolidation and if permitted by local regulations, farm residences or structures which existed prior to the adoption of the ordinance may be separated from a larger farm parcel.

The Wisconsin Farmland Preservation program is effective in terms of participation. As of June, 1983, a total of 22,000 farms had qualified for tax credits resulting in approximately 4.5 million acres of farmland being protected. One reason why the program has enjoyed such a level of success is that it has a strong voluntary component. Participation in planning and zoning, individual agreements and claiming tax credits is not mandatory. However, the inclusion of an individual's property in a preservation area of local plans and ordinances is not voluntary; rather, this determination is based on a set of locally developed and adopted criteria.

4.2.2. Wisconsin Agricultural Impact Statement Program

Wisconsin's Agricultural Impact Statement Program has been in effect since October, 1978, and involves the review of public projects such as wastewater treatment plants, landfills, roadways, etc., as required by Section 32.035 of the Wisconsin Statutes. An Agricultural Impact Statement (AIS) is required to be prepared for projects that involve the actual or potential use of eminent domain powers in the acquistion of an interest in more than five acres of land from any one farm operation. The AIS typically includes a description of the proposed project, the agricultural setting of the project area, an analysis of potential impacts on agricultural activity in the area, description of proposed project alternatives, overall recommendations concerning the significance of the project impacts on farm-

land and farm operations and ways in which to minimize any adverse impacts. The AIS is prepared by the staff of the Land Resources Bureau, Environmental Evaluation Section of the Wisconsin Department of Agriculture, Trade and Consumer Protection.

Acquisition negotiations with landowners cannot begin until 30 days after the AIS has been published. AIS costs are borne by the project initiator. The major purposes of the AIS program are to insure that farmowners, project initiators and other concerned parties are fully informed of the potential agricultural impacts of a proposed project before project lands are acquired, and to suggest ways in which potential adverse agricultural impacts of a proposed project can be reduced or avoided.

4.2.3. Right-to-Farm Law

Wisconsin's Right-to-Farm law (S.823.08 Wisconsin Statutes) was enacted in 1981 as nuisance legislation. The purpose of the law is to acknowledge that the changes in agricultural technology, practices and scale of operation have occaisionally created conflicts between agricultural and other activities. The law is not intended to hamper agricultural production or the use of modern technology, but rather to establish guidelines for resolving these conflicts.

According to the law, if the land in question is not subjected to an ordinance, the court may assess only nominal damages if the agricultural use or practice is found to be a nuisance. The court may also order the defendent to adopt different agricultural practices.

If the land in question is subjected to an ordinance, the court may not assess any penalty against the defendent which would substantially restrict or regulate agricultural practices.

4.3. Minnesota

Minnesota's efforts at agricultural land preservation has several aspects: The State Agricultural Land Preservation and Conservation Policy; tax incentives through the Minnesota Agricultural Property Tax Law; the Metropolitan Agricultural Preserves Act, the State Environmental Review Rules, the Metropolitan Council Guidelines, and the Right-to-Farm Law. These elements are discussed in the following sections. In addition to these Statewide efforts, there are a few county and local zoning initiatives that have been enacted in order to preserve agricultural land. Examples of these county and local zoning efforts include:

- The 1974 Carver County zoning ordinance limiting residential density to one unit per 40 acres, and limiting commercial/industrial development;
- The City of Lakeville's Agricultural Preservation Zoning District, protecting the City's prime agricultural land;
- The City of Farmington's long-term agricultural zoning classifications; and
- the City of Shakopee's Comprehensive Plan supporting the policy objective of enacting a "40 acre minimum lot agricultural district in productive agricultural areas limiting development to single family residential and farmsteads".

Furthermore, a 1980 study by the Minnesota State Planning Agency found that 64 of the State's 87 counties had county zoning ordinances with some emphasis on land use controls and agricultural land (Dennistoun, 1983).

4.3.1. Minnesota Agricultural Land Preservation and Conservation Policy

In 1982, the Minnesota Legislature formalized and adopted a policy to protect farmland in the State (Minnesota Statutes Section 17.80-17.84). Minnesota has adopted a policy of preserving agricultural land and conserving its long-term use for the production of food and other products. This policy is accomplished by:

- Protection of agricultural land and certain parcels of open space land from conversion to other uses;

- Conservation and enhancement of soil and water resources to ensure their long-term quality and productivity;

- Encouragement of planned growth and development of urban and rural areas to ensure the most effective use of agricultural land, resources, and capital; and

- Fostering of ownership and operation of agricultural land by resident farmers.

Methods to accomplish this policy statement include:

- Defining and locating lands well suited for the production of agricultural and forest products, and the use of that information as part of any local planning and zoning decision;

- Providing local units of government with coordinating guidelines, tools and incentives to prevent the unplanned and unscheduled conversion of agricultural and open space land to other uses;

- Providing relief from escalating property taxes and special assessments and protection of normal farm operations in agricultural areas subject to development pressures;

- Development of state policy to increase implementation of soil and water conservation by farmers;

- Assuring that state agencies act to maximize the preservation and conservation of agricultural land and minimize the disruption of agricultural production, in accordance with local social, economic, and environmental considerations of the agricultural community;

- Assuring that public agencies employ and promote the use of management procedures which maintain or enhance the productivity of lands well suited to the production of food and other agricultural products;

- Guiding the orderly development and maintenance of transportation systems in rural Minnesota while preserving agricultural land to the greatest possible extent;

- Guiding the orderly construction and development of energy generation and transmission systems and enhancing the development of alternative energy to meet the needs of rural and urban communities and preserve agricultural land to the greatest possible extent by reducing energy costs and minimizing the use of agricultural land for energy production facilities; and

- Guiding the orderly development of solid and hazardous waste management sites to meet the needs and safety of rural and

urban communities and to preserve agricultural land to the greatest possible extent by minimizing the use of agricultural land for waste management sites.

Agricultural land to be protected or considered for protection in Minnesota includes soil classes I through IV as identified by the SCS in the land capability classification system and the soil survey, as well as other land identified by a local unit of government that is in agricultural use. "Agricultural use" in this case also includes wetlands, pasture, and woodlands accompanying other land that is used for farming activities.

This policy legislation also established the Commissioner of the Minnesota State Department of Agriculture (MSDA) as the person (and agency) responsible for implementing certain portions of the requirements of the policy. Specifically, all State agencies are required to submit the details of proposed projects or actions that would adversely affect 10 acres or more of agricultural land to the MSDA for review. The MSDA, in negotiation with the other agency, recommends implementation of the proposed project or suggests alternatives to the project. If, after evaluating the alternatives, the proposing agency determines that costs of implementing an alternative outweigh benefits to agriculture, the agency must notify the MSDA of that determination.

4.3.2. Tax Incentives

Minnesota provides certain tax incentives to qualifying farmland owners through the 1967 Minnesota Agricultural Property Tax Law (Minnesota Statutes, Section 273.111) commonly referred to as the "Green Acres" Law. The law, administered through the Minnesota Department of Revenue, provides for deferred real property taxation as well as protection from special local assessments as long as the land is kept in a qualified agricultural use.

In order to qualify for this program of tax incentives, the real estate must be at least 10 acres in size, produce at least one third of the total family income of the owner, and must be devoted to the production of agricultural products. Meeting these requirements, the owner may make

application for inclusion of his or her land in the program. After acceptance into the program, the land is assessed at agricultural value for the purpose of real property taxes. The farmer is also exempt from payment of special local assessments levied on the property after acceptance.

If the eligible property is removed from the program for any reason, the owner is required to repay the property taxes deferred over the preceeding three years, with no interest penalty if promptly paid. All deferred special assessments plus interest are due within 90 days of disqualification. If not paid in 90 days, this rollback amount is penalized at a 10 percent interest rate for the current year. Property can be sold with no payment of deferred taxes or assessments if the property continues to qualify for the program.

4.3.3. Metropolitan Agricultural Preserves Program

In 1980, the Minnesota legislature approved the Metropolitan Agricultural Preserves Act (Minnesota Statute, Chapter 473H) for the purpose of preserving farmland in the seven-county Twin Cities metro area. The Act and supporting program are designed to provide a means by which lands in the metropolitan area, designated for long-term agricultural use by local and county government, will be taxed in an equitable manner, protected from special local assessments, protected from unreasonably restrictive State and local regulations of farm practices, protected from the taking by eminent domain, and given the protection and benefits required to maintain viable farm operations in the metropolitan area.

The Metropolitan Agricultural Preserves Program is a voluntary program administered by local governmental units. Local governments are first required to prepare a comprehensive plan for their jurisdiction and enact a zoning ordinance that provides zones for long-term agricultural use. Upon completion and approval of the planning and zoning phase, land zoned for long-term agricultural use is eligible for agricultural preserve status. The farmland owner must apply to have his or her land placed into preserve status and must agree by written covenant that the land will be kept in farming use indefinitely for at least a minimum of eight years. Either the

farmland owner or the local governmental unit can initiate the process to end the agricultural preserves status of the farmland.

In order to be eligible for the program, long-term agricultural land comprising 40 or more acres is required. Noncontiguous parcels may be used to achieve the minimum acreage provided each parcel is at least 10 acres and all parcels are farmed as a unit. Under certain conditions, acreages smaller than 40 acres are allowed. When approved for inclusion as an agricultural preserve, land must be maintained for agricultural production and the average maximum density of residential structures within the preserve cannot exceed one unit per 40 acres. When a separate parcel is created for a residential structure, as allowed above, the parcel ceases to enjoy the protection and advantages of the program, but the residential unit continues to be included in the maximum residential density for the original preserve.

Eligible farmland owners receive six specific benefits for participating in the program, as set forth in the Metropolitan Agricultural Preserves Act. First, real property within an agricultural preserve is valued according to the Green Acres Law described previously. Second, a maximum amount is placed on total tax rates not to exceed 105 percent of the statewide average mill rate in town for all purposes (Section 473H.10). Third, because construction projects for public sanitary sewer systems and public water systems benefiting land or buildings in agricultural preserves are prohibited, as are new connections to existing systems, special assessments for such improvements are also prohibited (Section 473H.11). Fourth, local governments and counties are prohibited from enacting ordinances or regulations within an agricultural preserve that would unreasonably restrict or regulate normal farm practices or structures, unless most activities bear a direct relationship to public health and safety (Section 473H.12). The fifth benefit to participating farmers is protection from taking by eminent domain. Before such land can be taken for public use a lengthy review process must be completed which includes an analysis of alternatives (Section 473H.15). The final benefit is protection from annexation by nearby municipalities without approval by the Minnesoata Municipal Board.

4.3.4. Minnesota Environmental Review Program

The Minnesota Environmental Review Program was created in the revised rules of the Minnesota Environmental Quality Board. Section 6 MCAR 3.038. AA.4 of these rules requires that an environmental assessment worksheet (EAW) be prepared by the local unit of government for projects resulting in the permanent conversion of 80 or more acres of agricultural land to a more developed land use. The Minnesota EAW is analagous to the NEPA environmental impact assessment in its scope and purpose. The EAW form includes prime and agricultural land among its list of sensitive areas. The effects of a proposed project upon prime agricultural land are addressed during the preparation of EAWs for projects to which 6 MCAR 3.038AA does not apply.

4.3.5. Metropolitan Council Guidelines

The Metropolitan Development Guide is a compilation of policy statements, goals, standards, programs and maps to guide an orderly and economic development of the metropolitan Minneapolis/St. Paul area. The Guide's chapter on the Develop-Framework gives specific policies for the Rural Service Area. The Rural Service Area is broken into three major regions: (1) Commercial Agricultural Regions, (2) Rural Centers, and (3) General Rural Use Regions. Long-term preservation of agriculture is encouraged in the Commercial Agricultural Regions. These regions are characterized by prime agricultural soil, a strong agricultural economy and a lack of urban development. Rural Centers are basically rural trade center, accommodating moderate-sized residential and commercial developments. General Rural Use Regions consist of agriculture, parks, hobby farms and residences. Commercial farms are encouraged to remain in these areas.

There are two specific Metropolitan Council policies which address development in the Rural Service Area. These policies are as follows:

- Metropolitan Council Policy No. 19: Metropolitan sewer service and urban level transportation service will not be provided to the Rural Service Area. This policy is consistent with the council's position that the Rural Service Area should not accommodate large amounts of development. Rather, these large developments should be located in the Urban

Service Area, where there are sufficient services and land to accommodate new growth.

- Metropolitan Council Policy No. 20: Local units of government located at least partly in the Metropolitan Rural Service Area must adopt comprehensive plans and implementation programs which are consistent with regional policies and plans, and with the policy identified above (MCP No. 19). Plans determine if any lands located within a local government's jurisdiction are suitable for long-term agricultural use. Suitable lands are further protected by specific planning and zoning ordinances. Lands not deemed suitable for long-term agricultural use are considered as General Rural Use Areas.

4.3.6. Minnesota Right-to-Farm Law

The Minnesota Right-to-Farm Law was enacted in 1982, and amended in 1983, as the Nuisance Liability of Agricultural Operations (Section 561.19 of the Minnesota Statutes). According to this law, an agricultural operation which is part of a family farm cannot be considered a nuisance after six years of operation if the farm was not considered to be a nuisance at its established date of operation. The provisions of this nuisance law do not apply, however, to negligent or improper operation of equipment, or to threats to public health or safety, or pollution of the environment.

4.4. Michigan

Michigan's efforts at agricultural land preservation are focused on the State Farmland and Open Space Preservation Program, as described below.

4.4.1. Michigan Farmland and Open Space Preservation Act

Michigan's farmland preservation program is based on the Michigan Farmland and Open Space Preservation Act, passed in 1974. The program is centered around a modified transfer of development rights program in which the title to the land does not change hands. This "transfer" is accomplished by a legally binding development rights agreement held jointly by the landowner and the State. In simpler terms, a farmer signs a contract with the State in which he or she agrees not to develop the land in question for 10 years or more. In turn, the farmer can claim a special state

income tax credit for the amount by which the property tax exceeds seven percent of the household income; in addition, the farmer's land is exempt from special assessment taxes.

The Farmland and Open Space Preservation Program is administered by the Michigan Department of Natural Resources. Participation in the program is completely voluntary on the farmer's part, but must be approved by the State and the local governing body having jurisdiction, and reviewed by the county planning agency, the regional planning agency, and the district office of the soil conservation agency. Farmland eligibility requirements require the farm meet one of the following three conditions: (1) be 40 acres or more, in one ownership and devoted solely to agricultural use; (2) be five to 40 acres in size and have a gross income from agriculture of $200 per year or more per acre; or (3) be designated by the Department of Agriculture as a specialty farm. With acceptance into the program, the farmer basically agrees to the following constraints:

- A structure shall not be built on the land except for use consistent with farm operations or with the approval of the local governing body and the state land use agency;
- Land improvements shall not be made except for use consistent with farm operations or with the approval of the local governing body and the state land use agency;
- Any interest in the land shall not be sold except a scenic, access, or utility easement which does not substantially hinder farm operations;
- Public access shall not be permitted on the land unless agreed to by the owner; and
- Any other condition and restriction on the land as agreed to by the parties that is deemed necessary to preserve the land or appropriate portions of it as farmland.

The farmer must also notify the State and local government body holding the development rights two years prior to the termination of the contract of his or her intentions regarding future plans with respect to the land.

In return for restricting development rights on the land, the farmer is protected from the imposition of special assessments for sanitary sewers, water, lights, and non-farm drainage systems. A tax credit, in the

form of a circuit breaker credit, is applied to the farmer's state income tax in the amount by which the real property taxes on the farm and farm buildings exceed seven percent of the household income. If the credit exceeds the farmer's tax liability, he or she receives an income tax refund for the difference.

The State may relinquish the agreement if it determines that furute development of the land is in the public interest. The landowner pays no back taxes. The landowner may request relinquishment following the same procedures as those used to create the agreement. If the request is approved, he or she is liable for all income tax credits received, plus six percent compound interest. If the agreement expires according to its terms, the landowner then is liable for the last seven years of credit without interest. If an owner knowingly converts the land to an ineligible use without first going through the procedures outlined above, he or she may be enjoined by the State or the local governing body, and subjected to a civil penalty for actual damages, not to exceed twice the land's fair market value at the time the application for the development rights agreement was approved.

While the program has not stopped the conversion of Michigan farmland to other uses, it has removed a sizeable portion of its available farmland from the threat of conversion. As of 1980, over 1.5 million acres of farmland were protected by the program. This acreage amounts to approximately 16 percent of all eligible farmland in the State. The average contract period is about 20 years, indicating the farmers' willingness to make a long-term commitment to farmland preservation. Approximately 40 percent of the farmland in Michigan's metropolitan areas has been enrolled in the program (Conway in AG-70).

4.5. Indiana

Indiana has no coordinated statewide program to encourage farmland preservation. There are, however, incentives available to farmers in the form of tax incentives and an agricultural nuisance law. Agricultural zoning is also available to farmers in the form of tax incentives and an

agricultural nuisance law. Agricultural zoning is also available at the county and local level (Stevens 1983).

4.5.1. Tax Incentive

The tax incentive offered to farmers is in the form of a preferential assessment of land for real property taxation purposes at the land's current use value. This law, enacted in 1961, stipulates that all land in agricultural use is automatically assessed at its current use value. The Indiana law differs from most other states' laws because there are vitrually no restrictions or special requirements necessary to take advantage of the program. As long as the tax assessor classifies the parcel of land in agricultural use, the owner will be assessed taxes based on that use.

4.5.2. Right-to-Farm Law

Public Law 199 restricts nuisance suits against farmers. The law, enacted in February, 1982, states that no agricultural operation can be classified as a private or public nuisance after it has been in existence and in operation continuously for more than one year provided:

- there is no significant change in the hours of operation;
- there is no significant change in the type of operation; and
- the operation would not have been a nuisance at the time the agricultural operation began in that locality.

This law also applies to industrial operations and does not apply where a nuisance results from the negligent operation of the farm.

4.5.3. Zoning

Agricultural zoning is available at some local jurisdiction levels in Indiana. However, only one county presently has an agricultural zoning ordinance in effect (St. Joseph County). Because there is no State planning/development agency in Indiana, no coordinated program of assistance is available to counties and municipalities to help establish agriculture-

protecting zoning. Any preservation activities must be instigated at the local level, although the Indiana Division of Agriculture does provide assistance to county governments to help evaluate growth using the Soil Conservation Services' Land Evaluation and Site Assessment System (Stevens 1983).

4.6. Ohio

Two items of legislation comprise Ohio's efforts to preserve farmland. These efforts are a tax deferral program and an agricultural districts program.

4.6.1. Tax incentives

Ohio's tax deferral program (Section 5713, Revised Code), enacted in 1974, is typical of tax incentive programs enacted by many other states. Eligible farmland owners may apply to have their land assessed for real property tax purposes at the land's agricultural use value instead of its fair market value. When such land becomes disqualified, the farmer must pay back all taxes deferred over the preceeding four years. No interest penalty is applied if deferred taxes are repaid in a reasonable amount of time.

4.6.2. Agricultural Districts

The Ohio agricultural district program (Chapter 929: Ohio Code Supplement) was enacted in June of 1982. The program consists of the establishment of voluntary agricultural districts and is administered by the County Auditor's office in each county. Farmers who participate in the program receive exemption from special assessments on their farmland, protection from most nuisance suits, and protection from taking by eminent domain and other actions by public entities which may lead to the loss of farmland, for a period of five years.

To qualify for agricultural district status, land must be used exclusively for agricultural purposes and be over 30 acres or else have produced an annual gross income of $2,500 over the preceding three years. The

farmer must apply for inclusion in the district with the County Auditor and the Clerk of the Municipal Corporation if such land is under petition for annexation by the municipality

Once accepted and approved as an agricultural district, the land is exempted from special assessments for the purpose of sewer, water, or electrical service on the real property. If the property is disqualified or is withdrawn from the district program, all deferred assessments plus interest become due.

Civil action for nuisances involving agricultural activities are excluded in agricultural districts provided the agricultural activities were established first and these activities are not in conflict with Federal, State, and local laws and rules. This law serves to protect farmers in agricultural districts from nuisance suits involving normal agricultural operations.

Land in Ohio's agricultural districts is also protected from indiscriminate taking through eminent domain. No public or private entity can advance a grant, loan, interest subsidy, or other distribution of public funds for the construction of housing, commercial or industrial facilities to serve non-agricultural land uses within an agricultural district. Any project requiring 10 acres or more of land in an agricultural district must be reviewed by the Ohio Department of Agriculture to determine the project's potential effect on both agricultural production in the district, and on the policies, plans, objectives, and programs of other State agencies or local governments. If this review identifies adverse impacts to agriculture, a public hearing process is initiated. If the sponsor of the proposed project does not withdraw or alter the project according to recommendations, the Director of the Department of Agriculture may institute a civil injunction to stop the project.

Because the Ohio agricultural district is relatively new, no conclusive statements can be made about its effectiveness at this date.

5.0. AGRICULTURAL LAND PROTECTION PROGRAMS USED IN OTHER STATES

5.1. Oregon's Agricultural Land Protection Program

The protection of agricultural lands is one of the primary objectives of Oregon's Land Use Program. In 1973, the State Legislature enacted SB 100 which provided the enabling framework for a statewide comprehensive planning program. This law created the Land Conservation and Development Commission (LCDC) which has the responsibility to coordinate the preparation of comprehensive plans in Oregon. SB 100 requires every city and county in the state to prepare and adopt a comprehensive plan.

The LCDC developed a set of mandatory planning goals with which every city and county comprehensive plan and accompanying zoning and subdivision ordinance must comply. Planning Goal 3, entitled Agricultural Lands, is the basis of the Oregon Agricultural Lands Protection Program. Goal 3 includes the following seven elements:

1. Policy statements on the economic and environmental value of agricultural lands;
2. A definition of the agricultural lands to be inventoried and protected;
3. The specific uses that are allowed on these lands;
4. Land division standards;
5. Exceptions for the conversion of agricultural lands;
6. Special benefits to the protected lands;
7. The limitation of urban growth in rural areas.

The following sections describe these elements in more detail.

5.1.1. Policy Statements

The Oregon Legislature, in 1973, prepared a major revision of the farm use tax deferral system and approved the Agricultural Land Use Policy

(ORS 215.243). The four basic elements of the policy are as follows: (a) Agricultural land is a vital natural and economic asset for the people of the State; (b) Preservation of large amounts of agricultural land in large blocks is necessary to maintain the agricultural economy; (c) Expansion of urban development in rural areas is a public concern because of farm and urban activity conflicts; and (d) Incentives and privileges are justified to owners of land in exclusive farm use zones because such zoning limits alternative use of that land. Goal 3 implements this policy by requiring these lands be inventoried and preserved by adopting Exclusive Farm Use Zones (EFU) pursuant to ORS 215.

5.1.2. Definition of Agricultural Lands

The definition of those agricultural lands which must be protected in Oregon is one of the most controversial elements of the preservation program. Goal 3 defines "agricultural lands" as those lands of SCS Class I-IV soils and other lands suitable for farm use. This definition essentially includes all suitable agricultural land, not just prime farmlands. By broadly defining agricultural lands, Goal 3 attempts to end debate over whether or not a parcel of land is good or marginal, or if a commercial farming operation can be supported by the land. A resource inventory of these soil types is an important component of this definition, this inventory is used in determining if the land is available for farm use or has already been committed to non-farm use.

5.1.3. Uses of Agricultural Land

Agricultural land preserved by the EFU zone designation resembles an agricultural district more than the familiar urban zoning system. This EFU designation encourages and protects farm uses and also allows a variety of non-farm uses such as schools, churches, agri-business activities, and home occupations. Non-farm residential uses are generally prohibited; however, in cases where the dwelling(s) does not interfere with farm activities and is located on land that is unsuitable for farm use, such uses may be allowed.

5.1.4. Land Division Standards

An important factor in preserving agricultural activities is the land division standards that are used. In Oregon, this approach has been to require that the land division sizes be appropriate for the continued existence of commercial agricultural enterprise. Because of the different scales of commercial farm activities in the State, a statewide minimum standard could not be used. Instead, standards have been developed by individual counties to account for the differences in soil types and climate in various parts of the State.

5.1.5. Exceptions

In order to convert agricultural land to non-agricultural uses, a specific procedure must be followed. Four criteria must be considered before the conversion is allowed. These criteria are: (1) need; (2) alternative locations; (3) impacts; and (4) compatibility with farming. The determination of need must not be based solely on the continuation of growth trends nor the market demand for rural non-farm uses.

5.1.6. Benefits for Protected Lands

Two specific benefits are extended to those lands protected by Oregon's EFU zones. The first benefit prohibits the State or local government from adopting ordinances that interfere with or regulate "accepted farming practices." Such practices normally cause noise, dust, or odors. However, this clause does not restrict the governing body's ability to protect the health, safety, and welfare of its citizens.

The second benefit is the provision of certain tax benefits to the owners of agricultural property. Land which is both zoned "EFU" and continually farmed is appraised at its farm use for property and inheritance tax purposes. Such lands are also exempt from special district and rural service assessments including sewer, water, and solid waste. This link between zoning and special tax treatment is essential to the success of an agriculture preservation program because it provides a balance between the public and private interests in the use of agricultural lands.

5 1.7. Encouragement of Growth in Alternative Areas

Any successful agricultural land protection program must recognize that development limited in one area must be provided for and encouraged in other areas. The Oregon program requires every city in the State to establish an urban growth boundary that includes enough urban or non-resource lands to accommodate the community's housing, commercial, and industrial needs up to the year 2000. In order to discourage urban sprawl, the urban growth boundaries must not include land beyond projected need, and in many instances, cities have placed vacant land within urban growth boundaries in holding zones in which agriculture or open space is the only permitted use. Vacant land in such holding zones can only be converted to urban land uses after the need for such uses occurs.

5.2. Maryland Agricultural Land Preservation Foundation

The Maryland Agricultural Land Preservation Foundation was authorized in 1977 by the Agricultural Land Preservation Foundation Act (Agriculture Article, Section 2-501 et req.). The purpose of the program is to allow the establishment of agricultural preservation districts in which the subdivision and development of agricultural land would be prohibited. Farmland owners can voluntarily petition the Foundation and the governing body in their county to establish an agricultural preservation district. The agricultural preservation district is established for a five-year duration. Additionally, members of such districts can sell or donate easements, which prohibit development of non-agricultural uses for a minimum of 25 years.

In order to participate in the program, each county must appoint a five-member Agricultural Preservation Advisory Board. The Board advises the county governing body on the formation of agricultural districts and on the approval of easement purchases. Furthermore, the Board formulates local priorities for agricultural land preservation, including the required county-level right-to-farm ordinance.

The easements to be purchased by the Foundation specify the prevention of development, prohibition of dumping of trash and other materials, and

the displaying of most signs and billboards. These easements also require that sound agricultural, soil, and water conservaton activities be carried out. Easements purchased by the Foundation are to be held for as long as profitable farming is feasible, which is the sole criterion for termination decisions. Easements may not be reviewed for possible termination sooner than 25 years after the date of institution.

In order to sell an easement, the landowner must make written application to the Foundation, including in the request the owner's asking price. For such an offer to be considered by the Foundation, the county governing body must approve the application. The county governing body bases its decision upon an evaluation of the land in light of current local regulations, patterns of development, and priorities for the preservation of agricultural land.

The Foundation assigns highest priority for purchase to those easement offers in which the ratio of offering price to appraised value is lowest. The appraised value is the maximum amount which the Foundation is allowed to pay. By buying only those easements which are offered at the lowest relative prices, the Foundation will, in effect, provide partial compensation in an amount which is acceptable to the landowner.

Maryland's Agricultural Land Preservation Program went into effect in 1979, when regulations for the program were adopted by the Foundation. In the initial year and a half of operation, participation was substantial. By mid-1980, a total of 100 agricultural districts had been created containing over 22,200 acres and 158 properties in 13 counties. All counties in the State had established Advisory Boards and many had passed local ordinances protecting farm operations within districts from nuisance actions. Offers to sell easements to the Foundation had been received on 11,500 acres at an average asking price of $1,100. Because of funding restraints, Maryland's easement purchase program by itself will not be enough to maintain the State's agricultural resource base. Clearly, this program entails a high level of public costs, but the result is long-term protection of those lands covered by the program.

6.0. QUANTITATIVE METHODS FOR ASSESSING IMPACTS TO AGRICULTURAL LAND

The assessment of impacts of a particular project or program on agricultural land is difficult because of the many qualitative, quantitative, and political considerations that are involved. There are even those who claim that conversion of agricultural land is not an important issue because, in the final analysis, the economic law of supply and demand will cause existing market forces to preserve the necessary amount of agricultural land. Regardless of these contentions, quantitative methods can be used to gauge the desirability of using agricultural land for other uses. These methods range from generally informal methodologies that are based solely on the quantity and quality of farmland that would be converted, to the more formalized approach developed by the U.S. Department of Agriculture's SCS. These methods are summarized below in this chapter.

6.1. Agricultural Land Evaluation and Site Assessment

The SCS, as part of the Federal policy to protect farmland, has developed a system for assessing the importance of farmland. This system is called the Agricultural Land Evaluation and Site Assessment (LESA). LESA was developed with the input of state and local government officials because it is designed for use at the county and/or municipal level. These levels of government can use LESA for: (1) identifying specific parcels or areas of land that should be set aside for agricultural use; (2) justifying the retention of a specific site in agricultural use; (3) determining the optimum minimum parcel size for farmland subdivision; (4) planning public projects such as roadways, sewers, or water systems; and (5) creating guidelines for the conversion of farmland to other land uses.

This methodology consists of two major parts: the evaluation of the quality of land for farming purposes and the assessment of sites in terms of their economic and social viability for use in farming operations. The assessment of sites for social and economic factors is accomplished at the local level, usually by planning agencies, while SCS computer programs are used to provide an evaluation of the quality of farmland. The following sections summarize the basic components of each major part of the LESA method.

6.1.1. Farmland Evaluation

The farmland quality evaluation process, as developed for LESA, consists of several factors including: land capability, the rating of important farmland soil, soil productivity, and soil potential. The soils are evaluated according to the four classifications below:

- Land capability classes. The USDA developed this system of classifying soils according to their crop-production restrictions, landscape form, and potential for field crops or pasture. Eight classes of soil are identified with subclasses according to more detailed limitation characteristics. For example, a Class I soil has few limitations that restrict its use, while a Class VIII soil may be totally useless for agriculture.

- Farmland importance. Four groups of important farmland have been identified by the USDA. These groups include prime farmland, unique farmland, farmland of statewide importance, and farmland of local importance. Definitions of these farmland types are available from the SCS.

- Soil productivity. The productivity of soil is based on the expected crop yields per acre using specific management practices.

- Soil potential. This factor is used to indicate the relative quality of soil for a specified use in comparison to other soil types in the area. Soil potential ratings are used as an alternative to the soil productivity rating.

Using these factors, assistance from local soil experts, and the SCS soils information printout, local decision makers set up a soils ranking system. The soils are ranked into about 10 agricultural groups, depending on local conditions. Each group encompasses from five to 15 percent of the available land in that local jurisdiction. A relative value of each agricultural group is then assigned by adjusting the average yield of each group so that the group with the highest yield would have a value of 100, while the lowest yield group would have a zero value.

6.1.2. Site Assessment

The site assessment, the second major part of the LESA methodology, is designed to identify farmland that is both economically viable and has the highest potential for continued agricultural production. Seven factors are considered in the site assessment process:

- Land use. Elements considered in this category include the percentage of land used for commercial agricultural production within a given radius, the percentage of the site commercially farmed in two of the preceding 10 years, and the land uses adjacent to the site.

- Agricultural viability. Elements considered here include the size of the farm, land ownership patterns, existing infrastructure serving the site, improvement on the site (barns, ponds, drainage systems, irrigation, etc.), and the impact on nearby farms if conversion takes place.

- Land use regulations/tax incentives. Elements considered in this category are the current zoning of the site, the surrounding land uses and the presence or absence of agricultural districts in the area.

- Project site alternatives. An examination is made on the availability of less productive land that could potentially use the proposed project.

- Compatibility. The compatibility or impact of the proposed project on the surrounding environment is examined to determine possible impacts on wetlands, historic areas, cultural resources, unique vegetation, or floodplains.

- Consistency with plans. The compatibility of the proposed project with comprehensive development plans for that area is determined.

- Urban infrastructure. The distance to urban areas, water and sewer systems, jobs, schools, and shopping is considered.

The local decision makers may choose the appropriate factors for the locality and assign an overall weight to each factor. Each factor is then broken down into intervals that are indicative of the traits that sites in the area might display:

Land in agricultural use within one half mile

90 - 100 percent

70 - 89 percent

40 - 69 percent

less than 39 percent

Each interval is assigned a point value. When a particular site is assessed, its characteristics are rated according to the interval point values of each factor. The point value is multiplied by the factor's weight and then summed for all factors. The resultant number is indicative of the particular site's importance within the locality's overall land use and farmland preservation goals.

Finally, the score developed from steps one and two of the LESA procedure are combined and compared to the locally predetermined ranges. These ranges are set up to indicate whether or not a site should be preserved for agriculture or be converted to other uses. Because these ranges are locally developed, they are sound devices that should give the decision makers a defensible basis for making such an important land use decision.

The SCS has conducted pilot programs to test the LESA system in 12 counties in six states. Only minor problems have been encountered in using LESA thus far. In all cases these problems are easily resolved and the systems works well.

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